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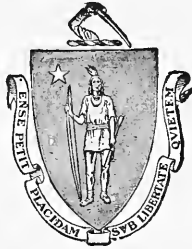


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SEVENTY-FIRST ANNUAL REPORT  
OF THE  
BOARD OF EDUCATION:  
TOGETHER WITH THE  
SEVENTY-FIRST ANNUAL REPORT  
OF THE  
SECRETARY OF THE BOARD,  
1906-1907.

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JANUARY, 1908.



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# STATE BOARD OF EDUCATION.

## 1908.

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CLINTON Q. RICHMOND,	. . .	<i>North Adams,</i>	. . .	May 25, 1913.
GEORGE I. ALDRICH,	. . .	<i>Brookline,</i>	. . .	May 25, 1914.
ELLA LYMAN CABOT,	. . .	<i>Boston,</i>	. . .	May 25, 1915.

### SECRETARY.

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### CLERK AND TREASURER.

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JULIUS E. WARREN,	. . . . .	<i>Worcester.</i>
FREDERIC L. BURNHAM,	. . . . .	<i>Cambridge.</i>

Agent for the Promotion of Manual Arts.

### CLERICAL ASSISTANTS.

AGNES CAROLINE BLAKE, *Chief Clerk.*      ESTHER E. ELWELL.

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ANNUAL REPORT

OF THE

BOARD OF EDUCATION.

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## ANNUAL REPORT.

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It is more than three score years and ten since Massachusetts won her reputation among the States of the Union for official leadership in public education. What time has wrought since the days of Edmund Dwight and Horace Mann! Then there were not 10 free public high schools outside of Massachusetts; now there are 7,000. Then there were few in the United States who had studied the art of teaching; now there are 100,000. Then there was not a State, county or city superintendent; now there are thousands. Then there was no public teaching of science, art, music, history, biology, physiology, psychology, philosophy, nature study, physical culture, domestic science, industrial arts or commercial branches. Then there were no evening schools, vacation schools, playgrounds or school gardens, and education of the deaf and blind was just in its infancy. There were no blackboards, suitable desks or seats; no sanitary or lavatory provision; no dictionaries or supplementary reading; no free text-books, paper, pens or pencils. To-day educational provisions are relatively luxurious. What has wrought this miraculous transformation?

The conservatism of human nature has delayed the launching of every new educational idea even in Massachusetts. The vote seeker among the taxpayers has protested against every new outlay. Not one of the glorious triumphs of public education even in Massachusetts has come except through ardent devotion and intense effort on the part of educational leaders. The State Board of Education has virtually led every advance in these seventy-one years. The records will show that more of the achievements in administrative and institutional advance in public education have had their initiative in this Board than from all other agencies in this State, if not in the nation. It is almost literally true that in seventy-one years this Board has never been united and hearty in the champion-

ship of any important movement in which it has not ultimately triumphed. It has, however, usually had its patience severely taxed by the conservative tendencies of its time.

In its early days the State Board of Education in Massachusetts was the most progressive official body in the world. Its early reports were reprinted by the Legislatures of other States, by the British Parliament and by the German government. To this Board in those days is due the initiative in the introduction of normal schools and administrative supervision and broadening of curriculum in grade work.

Since those early days the State Board of Education has been pedagogically conservative and administratively progressive. Extending the battle line in the warfare with ignorance and strengthening that line at every point have been its privileges, and never have these two ideas been more emphasized by the Board than at present. The Board is heartily harmonious in purpose, spirit and work for the attainment of results in both of these directions, and it considers itself fortunate also in the knowledge, experience and wisdom of its secretary, whose devotion and achievements are highly gratifying. With such aims the Board must always be between two firing lines. Ardent specialists are always demanding new things, are crying out for spectacular demonstration of zeal, — for something new under the sun. If this Board did not keep a rear guard alert and courageous, always on duty, several high-priced specialists with their retinue of devotees would be going up and down the State at cross-purposes at all times, each demanding some notable departure iridescent in attractiveness. The temptation would be irresistible if experience had not taught us that achievement for the people is infinitely more important than glorification of special advocates. Up to the present time in the seventy-one years none of the multitude of things that the Board has declined to champion has been demonstrated by later achievements to have been wise.

Irritating as is this constant firing in the rear by disappointed enthusiasts, the Board of Education is kept from any rash rainbow chasing, even if it desired so to do, by the sentinels of the State treasury that have to be passed in the legislative committees, from whom it is often impossible to get

the funds necessary for maintaining the highest efficiency of lines of effort of known value. There conservatism is often as annoying as the radicalism of the critics; but it must be confessed that it is much better for the cause of education, as well as for the treasury of the State, that the Board of Education has to make out an exceedingly strong case before the purse strings will be loosened.

This Board is not unmindful of the attractiveness of a number of new schemes now being urged, — each of which would apparently require slight outlay, but which would ultimately require high-salaried officials and elaborate expenses, with no prospect of important achievement; but the Board must bear the odium of declining to advocate these, even though it desired so to do, so long as the Legislature hesitates to provide for important established work.

It is cause for congratulation that in some respects the normal schools of this State lead in professional development. At the Hyannis Normal School provision has been made for as complete professional training for supervision under normal school ideals as is to be found in any normal school in the country. A four years' summer course has been provided for those who have the scholarship and experience requisite for expert supervision, but lack definite normal, professional training. In four summer terms, concentrating attention and energy upon specific needs, the student may get an admirable acquaintance with the latest and best professional ideals for supervision, under the guidance of Principal William A. Baldwin and his faculty, assisted by many of the eminent superintendents of the country. Theory and practice blend admirably in this course. A diploma thus earned signifies as much to a superintendent in the estimation of educators familiar with the professional work which it represents as any equipment obtainable for this line of educational activity.

The faculty for the year 1907 is given in the report of the visitors of the school.

It is also cause for congratulation that in one of the normal schools, at least, there is the most complete equipment for the intensive and extensive professional study of the history of education to be found in the State normal schools in the coun-

try. At Westfield, Prof. Will S. Monroe gives a course in the history of education that for professional discrimination and for service in future study and in the practice of education as teacher, principal or superintendent is rarely surpassed in any university.

It is universally recognized that Massachusetts was the first to require first-class high school education for admission to the normal schools, and she still stands almost alone in the rigid enforcement of this condition. It is also admitted that the training here given is unsurpassed by any institution in any part of the country so far as preparation for teaching in elementary schools is concerned, but it should also be known that in these schools is to be found the best preparation for principalships and supervision.

Beyond this work already well established there are two phases of enlargement of State work for which the Board must plead earnestly. First, provision must be made for the special training of teachers of agriculture in rural schools, equipping them to awaken intellectual zeal for such agricultural life as can be made profitable and enjoyable in this State. There is no place in the country in which intensified farming can be made more profitable or in which rural life can be made more attractive than here, and skillful teaching and cultured leadership in rural schools can do more than all other forces for the accomplishment of these ends. The new educational leadership at the State Agricultural College at Amherst adds materially to the advantage of introducing this movement at this time. President Butterfield is co-ordinating the work of the college with the new agricultural spirit of the public schools, as was evidenced by the summer school, in which some 200 teachers and 25 superintendents studied with keen relish the art of teaching agriculture. The State Normal School at North Adams for various reasons can be utilized in connection with the State college, so as to provide for the highest efficiency in such rural teaching and leadership.

The success of a highly interesting experiment at Petersham, a small town in the heart of a typical rural Massachusetts community, is most gratifying. Here is a town with less than a hundred pupils above six years of age, in which a

high school has been in successful operation with a good agricultural department. This was possible because of various lines of financial assistance which the State gives, by means of which practically one half the expense has been borne by the State, and students from near-by small towns have been able to avail themselves of its advantages. The school was started by Mr. Julius E. Warren, now agent of the State Board of Education, when he was superintendent of the Petersham union. One of the reasons controlling his selection as agent of the State Board was his initiative in the establishment of this school and the skill with which he developed it. Other similar schools are sure to be opened in rural centers under the expert leadership of Mr. Warren.

This Board is convinced that the educational work of rural communities should be directed to the retention in those communities of all boys in whom a taste for agriculture can be aroused. A new era has dawned for the Massachusetts farmer. The co-ordination of the new work at Amherst with that proposed at North Adams will introduce intensive farming to such an extent as to make an acre in Massachusetts yield much more in wealth-producing power than in the broad fields of the west.

The second phase of enlargement for which this Board earnestly pleads is provision for supplying skillful teachers of commercial branches. And there is exceptional opportunity at the State Normal School at Salem for training teachers in commercial subjects. The purpose is not merely to make teachers of stenography, typewriting and bookkeeping, but to send forth those who can teach young people to do business along the best modern lines.

Massachusetts has enjoyed a distinction given her by the education of all her children. More than a hundred years ago Thomas Jefferson laughed at Massachusetts for trying to be a commercial State without a piece of timber for a keel, and a manufacturing State without wool or cotton, iron or coal. Nevertheless, she has done very well up to the present time because of her leadership; she will never be handicapped so long as she raises men and women of vigorous, alert and well-poised thought and skill.

Massachusetts will hold her place among the States of the Union only by keen activity in keeping abreast of the times. Massachusetts has done more first things in education than any other State. She must also do more last things. Massachusetts must heed the message of Emerson, "Speak your latent conviction, and it shall be the universal sense." She must never forget that every part of the Union is now lining up to her past in educational matters. Forty years ago there were not five free public high schools beyond the Hudson whose graduates could pass the Harvard examinations; now there are examinations that admit to Harvard in nearly two hundred cities west of New England. Massachusetts has always led in educational salaries until within ten years; now we lag behind. We pay our normal school principals the price of an assistant in several normal schools of the west, while their principals receive from thirty to a hundred per cent. more than ours. There are several cities not large or wealthy whose salaries of grade teachers are fifty per cent. higher than in cities of the same size in Massachusetts, and many States have a minimum salary law. Beyond the Hudson education is one of the great features of legislation. Some of the strongest men among the law makers of New York, New Jersey, Pennsylvania, Maryland, Ohio, Indiana, Michigan, Illinois, Wisconsin and Nebraska have within the past five years made education their major in the school of statesmanship.

The State is not doing her duty at the present time in the matter of pensions for her teachers. Nowhere are pensions more just or necessary; nowhere are the obstacles to be overcome so great. In addition to the objections from the treasury sentinels, we have highly creditable sentiment against anything of this kind from our best people; while there are other highly influential classes who will not grant pensions to teachers unless there can be embodied in the bill a scheme for pensioning other classes in the community.

The matter has already been twice urged in reports of this Board and before the legislative committee, with no apparent results. Nevertheless, the Board repeats its recommendation with emphasis. Some time there will be a great awakening. In November last a sheriff was called upon to escort a woman

teacher “over the hill to the poorhouse” after fifty years of service in the schoolroom. One of the tragic features of the event is the fact that this woman had taught the sheriff faithfully and devotedly some years before. The spectacle would be quite common but for charitably inclined relatives, and it makes public enthusiasm over the little red schoolhouse somewhat of a farce.

We are always met in the advocacy of this measure by the offhand statement of prosperous men that teachers should be thrifty, and provide for their old age. There is a town within twenty miles of the State House that prides itself upon its thrift and its educational institution, which pays its grade teachers from \$1.30 to \$1.60 a day by the year. This town makes more than ordinary demands upon the teachers. Assuming that it is possible for a woman to lay aside ten per cent. of her salary, the total savings of thirty years plus the interest thereon would not yield her thereafter more than thirty-five cents a day on which to live.

We do not, however, advocate a pension law to save the State from disgrace in the eyes of sister Commonwealths, nor as any act of justice to the teachers themselves, but rather as wise legislation from the standpoint of the children and through them of the State. This provision may be deferred, — it cannot be prevented; and the legislators who provide for it will point with pride to this act of their public life.

Thomas Jefferson was identified with the Declaration of Independence and with the Louisiana Purchase, but the only reference he wanted on his tombstone was to his service to the cause of education. As a young man, Thaddeus Stevens secured the passage of an educational measure through the House of Representatives in Pennsylvania. Later in life he became the great commoner, was the leader of his party and the spokesman for Abraham Lincoln in the halls of Congress through the civil war; but in his dying hour he asked to have brought to him a simple testimonial in appreciation of his championship of education in the Legislature of Pennsylvania nearly forty years before, saying, “That was the one great act of my life.”

What Massachusetts needs above all else is leadership in the

cause of education in her legislative halls and elsewhere, — men who will say, with Horace Mann, “The next generation is my client.”

The Board would call especial attention to the report of its secretary and agents, in which several subjects here treated are dealt with at greater length, and to which are appended the statistics required by law.

ALBERT E. WINSHIP.  
THOMAS B. FITZPATRICK.  
CAROLINE HAZARD.  
JOEL D. MILLER.  
KATE GANNETT WELLS.  
CLINTON Q. RICHMOND.  
GEORGE I. ALDRICH.  
ELLA LYMAN CABOT.



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REPORTS  
OF  
NORMAL SCHOOLS.

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# STATE NORMAL SCHOOL, BRIDGEWATER.

ARTHUR C. BOYDEN, PRINCIPAL.

## INSTRUCTORS IN THE NORMAL SCHOOL.

ARTHUR C. BOYDEN, . . . . .	History and civil polity, and the history of education.
ALBERT G. BOYDEN, Principal Emeritus, .	Educational study of man, the principles and the art of teaching, school organization, school government, school laws of Massachusetts.
FRANZ H. KIRMAYER, . . . . .	Latin, Greek, French, German.
WILLIAM D. JACKSON, . . . . .	Physical science, mathematics.
CHARLES P. SINNOTT, . . . . .	Geography, physiology, and hygiene.
HARLAN P. SHAW, . . . . .	Chemistry, mineralogy, industrial laboratory.
FRANK E. GURNEY, . . . . .	Classics, geometry, astronomy.
CLARA C. PRINCE, . . . . .	Vocal music, algebra.
FANNY A. COMSTOCK, . . . . .	Arithmetic, geometry.
LILLIAN A. HICKS, . . . . .	Supervisor of practice work in the model school, child study.
ELIZABETH H. PERRY, . . . . .	Drawing and manual arts.
GRACE C. SMITH, . . . . .	Assistant in drawing.
ELIZABETH F. GORDON, . . . . .	Physical training.
RUTH W. SMITH, . . . . .	Assistant in physical training.
ALICE E. DICKINSON, . . . . .	English.
CAROLINE A. HARDWICK, <sup>1</sup> . . . . .	Vocal culture and reading.
ANNA W. BROWN, <sup>2</sup> . . . . .	Vocal culture and reading.
FLORENCE I. DAVIS, . . . . .	Biology, nature study.

## INSTRUCTORS IN THE MODEL SCHOOL.

BRENELLE HUNT, . . . . .	Principal.
ADELAIDE REED, . . . . .	Ninth grade.
MARTHA M. BURNELL, . . . . .	Eighth grade.
SARAH V. PRICE, . . . . .	Seventh grade.
NELLIE M. BENNETT, . . . . .	Sixth grade.
JENNIE BENNETT, . . . . .	Fifth grade.
MYRA E. HUNT, . . . . .	Fourth grade.
MARY L. PERHAM, . . . . .	Third and fourth grades.
SARAH W. TURNER, . . . . .	Third grade.
NEVA I. LOCKWOOD, . . . . .	Second grade.
FLORA M. STUART, . . . . .	First grade.

## INSTRUCTORS IN THE KINDERGARTEN.

ANNE M. WELLS, . . . . .	Principal.
FRANCES P. KEYES, . . . . .	Assistant.

## CHANGES IN THE FACULTY.

The following changes have been made in the faculty this year. Miss Lillie E. Merritt, assistant in the drawing department, resigned to continue her studies; and Miss Grace C.

---

<sup>1</sup> On leave of absence.

<sup>2</sup> Substitute.

Smith, a graduate of the State Normal Art School, and supervisor of drawing in the schools of Barnstable, was appointed to this position. Miss Margaret E. Fisher, assistant in the department of physical training, resigned, to become the head of a similar department in the Oshkosh, Wis., Normal School; Miss Ruth W. Smith, a graduate of the Boston Normal School of Gymnastics, was appointed to fill the vacancy. Miss Annie L. Sawyer, teacher of grade 2 in the model school, resigned in June; and her place has been filled by the appointment of Miss Neva I. Lockwood, a graduate of the Vermont Normal School at Randolph, and a teacher of experience. All of these positions were ably filled by the teachers who held them before the changes were made, and the new appointments are eminently satisfactory.

A six months' leave of absence was granted Miss Caroline A. Hardwick, head of the department of vocal expression; and we were very fortunate in obtaining the services, as a substitute, of Miss Anna W. Brown, a graduate of the four years' course of the Curry School of Expression, and a teacher of broad experience.

#### ENTRANCE BY CERTIFICATE.

The new plan of admission by certificate brought not only a very large entering class, but one that was also of unusual strength. Over eighty of the class were certificated in a greater or less number of the required studies. By another year the plan will be better understood, and a still larger proportion of well-qualified applicants may be expected. A strict enforcement of the conditions of this privilege will be necessary to insure the continued success of the plan.

#### NATURAL SCIENCE GARDEN.

The scheme of a natural science garden, spoken of in our last report, has been made possible through the generous gift to the school by Mr. Albert G. Boyden of one and five eighths acres of land to be used for this purpose. The land adjoins the campus, and is well adapted to the use for which it is intended. Comprehensive plans have been made, and the work of laying out the beds and walks is already begun. This addition to the equipment of the school will greatly facilitate the

work in natural science and geography, and will do much to promote, through school gardening, the teaching of the elements of agriculture, horticulture and floriculture.

#### YOUNG MEN IN THE SCHOOL.

The demand made upon this school for young men to teach in the public schools is far in excess of the supply. There is an opening for earnest young men of good ability and good habits. The teaching profession needs them. The school offers a four years' course with an abundance of electives along lines which appeal especially to young men, and in many cases the work is conducted in separate classes. In the training department the men have a special course, conducted by Mr. Brenelle Hunt, principal of the model school. This course aims to fit for the position of principal of a school; it also lays the foundation for the work of superintending schools.

A large proportion of the men, upon graduation or soon after, take advantage of the courses offered by Harvard University. Sufficient credit has been given for the work done in the normal school to allow the students to enter the junior year in the course for a degree. This arrangement combines in an excellent manner the professional and the collegiate training, and opens wide the door to the opportunities of the teaching profession. More than fifty of the male graduates during the last few years have added the collegiate preparation to the normal course, and they are now filling some of the most important positions in elementary and in higher education.

#### BROADENING THE COURSE.

In many of the departments it has been found wise to expand the work along lines which are particularly valuable to teachers. With the better preparation of students upon entrance, more and more expansion of this kind will be possible.

In English, broader courses in reading have been established, not merely for general culture, but for the purpose of gaining an acquaintance with the best books in each department of study. Definite theme work has been introduced, in place of some of the ordinary written examinations. In the department of vocal expression, regular platform exercises are presented

three times a week. These exercises are of a character which will assist the student in acquiring ease of expression in public. They consist of individual selections from a great variety of authors, reports on current events, scenes from plays, debates, etc. The three phases of the study of English are thus emphasized; namely, reading, writing and speaking.

The courses in drawing and those in manual training have been combined in the organization of a new course in manual arts. This course places the different forms of expression through the manual arts in their proper sequence, and lays the foundation by actual practice in handicraft for understanding the great industries of the world. Especial emphasis is placed on five lines: clay work, to illustrate the great industry of pottery in its many divisions; cardboard construction, for bookbinding, box making, etc.; wood working, in the construction of useful articles for school, home and individual use; the textile industries; and metal working.

In library economy, definite courses of practical work lead the students to an understanding of the organization and uses of a modern library, and teach them the best methods of using dictionary, cyclopedia and reference books.

In the model school a plan has been organized for the individual instruction of children by the abler students, as a part of the regular work in child study. Arrangements have been made for the extension of the practice work to several rural schools and to the schools of an adjoining city.

#### STATISTICS.

The statistics of the school for the year ending Aug. 31, 1907, are as follows:—

1. Number of students for the year, 250,—25 men, 225 women; number in the entering class, 116,—6 men, 110 women; number of graduates for the year, 82,—6 men, 76 women; number receiving certificates for special courses, 12,—1 man, 11 women.

2. Whole number of students who have been members of the school, 5,618,—1,359 men, 4,259 women; number who have received certificates or diplomas, 3,816,—912 men, 2,904 women; of whom 322 have graduated from the four years' course,—166 men, 156 women.

3. Of the 250 members of the school for this year, Plymouth County

sent 72; Norfolk, 55; Bristol, 36; Suffolk, 21; Middlesex, 16; Barnstable, 13; Worcester, 9; Essex, 7; Dukes, 3; Hampden, 3; Nantucket, 2; Franklin, 1; Hampshire, 1; the State of Maine, 5; Vermont, 3; New Hampshire, 2; Ohio, 1; total for Massachusetts, 239; 13 counties and 78 towns being represented; from other States, 11.

4. The distribution of the students for the year was as follows: special courses, 15,—3 men, 12 women; regular four years' course, 44,—20 men, 24 women; intermediate course, 41,—2 men, 39 women; kindergarten course, 6; elementary course, 144,—0 men, 144 women.

5. The average age of those admitted was 19 years, 5 months; that of special students, 27 years, 7 months; that of students entering upon regular courses, 18 years, 5 months.

6. Of the 116 admitted, 8 came from colleges, 2 from normal schools, and 106 from high schools and academies; 11 had taught previous to coming.

7. The occupations of the fathers of those admitted were given as follows: mechanics, 35; farmers, 11; merchants, 10; bookkeepers and clerks, 8; contractors and builders, 5; real estate and insurance, 4; managers of business, 3; foremen, 3; superintendents, 2; clergymen, 2; salesmen, 2; printers, 2; engineers, 2; coachmen, 2; banker, broker, town assessor and selectman, mail service, freight agent, railroad employee, fire department, motorman, sea captain, fisherman, expressman, sealer, sketchmaker, janitor, steward, teamster and laborer, 1 each; retired, 2; deceased, 6.

8. Of the 116 students admitted, Quincy sent 12; Boston, 6; Abington, 5; Bridgewater, Brockton, Fall River, Provincetown and Winthrop, 4 each; Braintree, Canton, Cohasset, Milton and Taunton, 3 each; Andover, Brewster, Dennis, Hingham, Hyde Park, Middleborough, Milford, Nantucket, New Bedford, Oak Bluffs, Rockland, Walpole, Weymouth, Winchester and Worcester, 2 each; Ashby, Barnstable, Dedham, Dighton, Haverhill, Kingston, Malden, Marion, Medford, Melrose, Newton, North Brookfield, Norwell, Plympton, Salem, Southbridge, Springfield, Waltham, Ware, Wellesley, West Bridgewater and Whitman, 1 each; the State of Vermont, 3; Maine, 2; Ohio, 1.

GEORGE I. ALDRICH,  
CAROLINE HAZARD,  
*Board of Visitors.*

## STATE NORMAL SCHOOL, FITCHBURG.

JOHN G. THOMPSON, PRINCIPAL.

## INSTRUCTORS IN THE NORMAL SCHOOL.

JOHN G. THOMPSON, . . . . .	Pedagogy.
E. A. KIRKPATRICK, . . . . .	Psychology, child study and school laws.
PRESTON SMITH, . . . . .	Natural science and school hygiene.
CHARLES S. ALEXANDER, . . . . .	Mathematics.
FLORA E. KENDALL, . . . . .	English.
NELLIE B. ALLEN, . . . . .	Geography.
FLORENCE M. MILLER, . . . . .	History.
ANNETTE J. WARNER, . . . . .	Drawing.
ELIZABETH D. PERRY, . . . . .	Music.
ABBY P. CHURCHILL, . . . . .	Nature study and biology.
LILLIAN A. PHILLIPS, . . . . .	Manual training.

## INSTRUCTORS IN THE MODEL AND PRACTICE SCHOOLS.

[The teachers in the normal school supervise the teaching of their respective subjects in the model and practice schools.]

CHARLES S. ALEXANDER, . . . . .	Principal of elementary practice schools.
MATILDA B. DOLAND, . . . . .	Supervising principal at Day Street school.
MERCIE A. ALLEN, . . . . .	Supervising principal at Edgerly school.
MARGARET M. SLATTERY, . . . . .	Supervisor, grammar grades.
MATTIE A. COLE, . . . . .	Supervisor, primary grades.
MARY McCONNELL, . . . . .	Supervisor, primary grades.
IDA M. AUSTIN, . . . . .	Supervisor, primary grades.
L. FRANCES JONES, . . . . .	Supervisor, primary grades.
CAROLINE G. HAGAR, . . . . .	Supervising principal at Highland Avenue school.
FLORENCE E. SCOTT, . . . . .	Principal of kindergarten.
GEORGIANA H. JUBB, . . . . .	Assistant kindergartner.

## GENERAL CONDITIONS.

The attendance at the Fitchburg Normal School Dec. 1, 1895, was 45; Dec. 1, 1900, 110; Dec. 1, 1905, 136; and Dec. 1, 1907, 172. These figures speak for themselves.

The normal hall was planned to accommodate 140. From the beginning four rooms have been used for model schools, for which no provision was made, thus reducing by four the number of recitation rooms available for normal classes, so that, in rooms planned to accommodate about 100, we are conducting a school of 171.

In September, 1903, a boarding hall with rooms for 52



pupils was opened. Dec. 1, 1903, there were 121 students in attendance at the school, 25 of whom were living at the boarding hall. Four years later, September, 1907, the school opened with 172 pupils, of whom 68 were in the boarding hall. The growth of the school from 121 pupils in 1903 to 172 in 1907 is to be attributed largely to the fact that the State had provided a suitable home for young women who desired to fit for teachers. Parents are unwilling to allow their daughters, and daughters usually are disinclined, to leave home to attend a school in a city where rooms and board must be sought at a boarding house or in private families among strangers, and not directly under the care of the school. Institutions, like individuals, find work if they are prepared. Opportunities that are open are often accepted when they would not be sought for. If the further growth of the Fitchburg Normal School is desirable, the State must provide beforehand for such growth. The fact that it cannot meet one half the demands upon it for teachers would indicate that all reasonable efforts should be put forth to advance its growth. This year there is also need for special repairs, and a small special appropriation will be asked for this purpose.

#### CLASSES FOR TEACHERS IN SERVICE.

Beginning with Oct. 23, 1906, teachers in Fitchburg and Leominster and other neighboring towns were allowed to close school one afternoon in two weeks for work at the Fitchburg Normal School. The work, given in detail below, consisted of a course of lectures upon the history of education, by Principal John G. Thompson, followed by grade meetings under the direction of members of the normal school faculty, and then by an address by some well-known educator. One hundred and six teachers were registered for this work.

Tuesday, Oct. 23, 1906:—

2.15-3.00. History of Education,—Mr. Thompson.

3.05-3.45. Grade Meetings with Members of the Normal School Faculty.

3.50-4.35. Address, The Personality of the Teacher,—Supt. J. W. Carr, Dayton, O.

Tuesday, Oct. 30, 1906:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.50-4.35. Address, The Teacher and the School, — Supt. J. G. Edgerly, Fitchburg, Mass.

Tuesday, Nov. 6, 1906:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.50-4.35. Address, Cultivation of the Appreciation of the Beautiful, — Mr. Walter Sargent, Boston, Mass.

Tuesday, Nov. 20, 1906:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.50-4.35. Address, Some Types of Practical Nature Study, — Dr. Clifton F. Hodge, Worcester, Mass.

Tuesday, Dec. 4, 1906:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.50-4.35. Address, Examinations for Physical Defects, — Supt. Arthur K. Whitecomb, Lowell, Mass.

Tuesday, Jan. 8, 1907:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45-4.35. Address, The Reality of Ideals, — Miss Margaret M. Slattery, Fitchburg, Mass.

Tuesday, Jan. 22, 1907:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45-4.35. Address, A Teacher's Obligations to himself, — Supt. George I. Aldrich, Brookline, Mass.

Tuesday, Feb. 5, 1907:—

- 2.15-3.00. History of Education, — Mr. Thompson.
- 3.05-3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45-4.35. Address, Trouble, — Supt. W. C. Bates, Cambridge, Mass.

Tuesday, Feb. 19, 1907:—

- 2.15-3.00. Fatigue, — Dr. Henry H. Goddard, Vineland, N. J.
- 3.05-3.45. Education of Defectives, — Dr. E. R. Johnstone, Vineland, N. J.
- 3.45-4.35. Address, Froebel's Principle of Self Revelation, — Supt. B. C. Gregory, Chelsea, Mass.

Tuesday, March 5, 1907: —

- 2.15–3.00. History of Education, — Mr. Thompson.
- 3.05–3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45–4.35. Address, The Individual Pupil, — Supt. Frank E. Spaulding, Newton, Mass.

Tuesday, March 19, 1907: —

- 2.15–3.00. History of Education, — Mr. Thompson.
- 3.05–3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45–4.35. Address, Moral and Social Values in History, — Supt. Wilbur F. Gordy, Springfield, Mass.

Tuesday, April 2, 1907: —

- 2.15–3.00. History of Education, — Mr. Thompson.
- 3.05–3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45–4.35. Address, New View Point in Education, — Hon. George H. Martin, Secretary State Board of Education, Boston, Mass.

Tuesday, April 16, 1907: —

- 2.15–3.00. History of Education, — Mr. Thompson.
- 3.05–3.45. Grade Meetings with Members of the Normal School Faculty.
- 3.45–4.35. Address, The Spirit of Service, — Assistant Supt. J. E. Burke, Boston, Mass.

#### LECTURES AND CONCERTS.

Through the hearty co-operation of the citizens of Fitchburg, Leominster, Gardner and other towns, the amount appropriated by the State for lectures and music has been so supplemented that the students have been able to enjoy unusual opportunities in this field. The following lectures and concerts (most of which have been held at the Fitchburg Normal School) have been open to all students at the school: —

Stories as a Mode of Thinking, — six lectures, by Richard G. Moulton.  
The Poetry and Philosophy of Robert Browning, — eight lectures by Edward Howard Griggs.

Three concerts, — Kneisel Quartette.

Browning recitals, — eight readings, by Christabel W. Kidder.

Choral Union productions, — Haydn's "Creation," and one other.

Everyman, — Ben Greet Players.

Macbeth, — Ben Greet Players.

## ACKNOWLEDGMENTS.

Mr. Herbert I. Wallace, who for many years has fostered the love of music in Fitchburg, and whose gift of the Jenks Musical Library has put the musical department of the Wallace Public Library in Fitchburg in the front rank among the libraries in the United States, brought the Longy Club to the school last March for a concert for wind instruments, to which the faculty and students of the school and those who had co-operated in building up the lecture fund were invited. We are glad to make this record of our appreciation of the kindly and helpful spirit which prompted this action.

Acknowledgments are also due for many gifts to the school, for the kindly co-operation of the officers of the Choral Union, and for the interest and assistance of all who have helped to make possible and successful the lecture courses.

## STATISTICS.

The statistics for the year ending Aug. 31, 1907, are as follows:—

1. Number of students for the year, 250 (including 106 teachers for special classes during the afternoons). Number in the entering class, 71 women. Number of graduates for the year, 46 women,—27 from the elementary course, 2 from the kindergarten course, and 17 from the advanced course. Number receiving certificates for special courses, 11.

2. Whole number of students admitted since the opening of the school (September, 1895), 738,—727 women, 11 men (this number includes the class admitted in the fall of 1907, but does not include the 106 teachers taking special afternoon work during the year).

3. Number of states represented in the membership of the school for this year, 3.

4. Number of counties in Massachusetts represented, 6.

5. Number of towns in Massachusetts represented, 34.

6. Average age of entering class, 19.1 years.

7. Number who have had experience as teachers, 18.

8. Occupation of parents: deceased 9; farmers, 12; engineers, 3; machinists, 2; retired, 3; manufacturers, 4; salesmen, 3; pattern makers, 2; electricians, 2; janitors, 2; ministers, 2; furniture makers, 3; mine broker, 1; designer, 1; night watchman, 1; painter, 1; railroad conductor, 1; milkman, 1; real estate agent and auctioneer, 1; comb maker, 1; tailor, 1; pattern maker, 1; publisher, 1; manager, 1; jeweler, 1;

fruit grower, 1; saw maker, 1; mason, 1; plumber, 1; weaver, 1; stove and furnace dealer, 1; mail carrier, 1; metal worker, 1; stable keeper, 1; carder, 1; bookbinder, 1.

Number of students in attendance Dec. 1, 1907, 171.

J. D. MILLER,  
CLINTON Q. RICHMOND,  
*Board of Visitors.*

## STATE NORMAL SCHOOL, FRAMINGHAM.

HENRY WHITTEMORE, PRINCIPAL.

## INSTRUCTORS IN THE NORMAL SCHOOL.

HENRY WHITTEMORE, . . . . .	School organization and government, pedagogy.
AMELIA DAVIS, . . . . .	Mathematics and astronomy.
FREDERIC W. HOWE, . . . . .	Chemistry, physics, dietetics, household sanitation.
AVERY E. LAMBERT, . . . . .	Biology, nature study, bacteriology, physiology.
LUCILE G. FRENCH, . . . . .	Assistant in laboratory work.
LOUISA A. NICHOLASS, . . . . .	Household arts.
ANNIE B. PENNIMAN, . . . . .	Household arts, sewing, laundry work.
LILLIAN A. ORDWAY, . . . . .	Geography, psychology of childhood, Latin.
MARY C. MOORE, . . . . .	English language and literature.
ANNA L. MOORE, . . . . .	History, history of education, civil polity.
MARY H. STEVENS, . . . . .	French, English.
JANE E. IRESON, . . . . .	Elocution and reading.
EDMUND KETCHUM, . . . . .	Drawing.
FREDERIC W. ARCHIBALD, . . . . .	Music.
MARY BENNETT, . . . . .	Physical culture, physiology.

## INSTRUCTORS IN THE PRACTICE SCHOOL.

ANTOINETTE ROOF, . . . . .	Principal.
SUSAN M. EMERSON, . . . . .	Ninth grade.
ANNA M. ROCHEFORT, . . . . .	Eighth grade.
GRACE LE B. ESTY, . . . . .	Seventh grade.
NELLIE A. DALE, . . . . .	Sixth and fifth grades.
ALICE V. WINSLOW, . . . . .	Fourth grade.
LOUIE G. RAMSDELL, . . . . .	Third and second grades.
ELIZABETH A. MALLOY, . . . . .	First grade.
PEBE M. BEARD, . . . . .	Kindergarten.

## IMPERATIVE NEEDS.

The pressure for an ever-increasing education extends all along the lines of intellectual and industrial growth, until the adjustment of what can be taught in any given period to the demand on the part of students either for immediate self-support on graduation or for an adequate equipment of educational facilities has become a most harassing process. Nowhere is the process more perplexing than in the normal schools of the country. To teach even the minimum that a grade teacher must know; to persuade her to remain in school long enough to advance beyond that required minimum; and to provide the

schoolrooms with modern educational appliances for making learning easy and diversified,—are tasks difficult even in schools of most modern construction and equipment.

But when, as is the case with the normal school at Framingham, such conditions do not exist, success does not attain unto its full fruition. The school is built on a hill, an excellent and costly kind of location. It is within easy access of many towns. It has a reputation of its own (as indeed and wisely has each of the ten normal schools of Massachusetts), and therefore its numbers overflow its housing capacity. There are, at present date of writing, over 80 applicants for entrance next fall, who ask to live in one or other of the two dormitories, and there are but 16 available double rooms; or, in other words, there are but 32 places for 80 would-be pupils. Board in the town is extremely difficult to obtain. The very few homes which are willing to receive pupils are already full, and there is no prospect of the opening of other homes to the students.

The school absolutely needs a new, large, up-to-date practice school. The present one has two grades in most of its small rooms. It has two other grades down town and a genuinely ungraded school in one of the town suburbs, and three or four more grades out of town. How can the desirable unity of a practice school be thus maintained? It is only the unflagging enthusiasm of the practice school teachers that keeps the instruction on a high level of efficiency. But they are becoming very weary under such long-continued handicapping of their best efforts. If, through the aid of the town and State, the services of two additional teachers could be obtained, the burden would be lessened in some degree.

#### PRACTICE SCHOOL PRINCIPAL.

Fortunately, these unsatisfactory local conditions have been somewhat offset since September by the appointment of Miss Antoinette Roof as principal of the practice school. Once a pupil, then a grade teacher at the Framingham State Normal School, next head of a large department in a Boston private school, she relinquished the advantages of the last position to assume the headship of the practice school. She has brought

to her new duties a calmness and clearness of will power and foresight which will benefit alike the normal and the practice school.

#### HOUSEHOLD ARTS DEPARTMENT.

This department of the normal school has outgrown the sanguine expectations of its donors and early workers. It now numbers 76 pupils. Each member of its last graduating class has an excellent position and salary as teacher or as supervisor of one or another institution. As the rooms assigned to household arts are no longer sufficient, the question arises as to the best method of limiting the number of its pupils; for that there must be a limit is a foregone conclusion, as long as the present building is occupied.

Though the educational tendency to specialization in our normal schools is eminently wise, it is not advisable to allow any one specialty to dominate what might be called the academic character of the regular courses. Household arts, for instance, must exist in due relation to the whole course of normal school instruction. Only by so doing can each course of study become a personal success; and just because household arts, more than any other specialty, stands in closest connection to individual and home conduct of life, must its course be surrounded with the other accompaniments of a regular normal school course.

But again, as the social tendency to specialization is sending more pupils to the household arts course than there is accommodation for them, admission to it must be curtailed either by establishing an arbitrary limit to numbers of pupils, or by some test of personal fitness, or by admitting only those who have done graduate work in high schools. Perhaps the last method might reduce too rapidly the number of applicants for household art training. It cannot be said too often nor too strongly that household arts is not cookery alone; it is the practical application of very many sciences in more or less degree to the skilled art of living.

#### CHANGES IN THE FACULTY.

Mr. Edmund Ketchum, formerly supervisor of the public schools of Lowell and still supervisor in Belmont and Lexington, has been appointed instructor of drawing and sloyd. It is



expected that in his teaching he will lay special emphasis on the inter-relation of manual arts and drawing. He takes the place at the school of Miss Jennie E. Boody, who, after four years of successful work as teacher of drawing, resigned and is now married. Miss Susan M. Emerson, who has relinquished the sloyd work which she taught with most excellent results, still retains her position as instructor of the ninth grade.

Miss Lucile G. French, a former graduate of the household arts course, has been appointed as special assistant to Mr. Howe and Mr. Lambert in laboratory work.

#### GIFTS.

Miss Emma Harris of Woonsocket, R. I., Miss Julia Sprague of Framingham and Mrs. Kate Gannett Wells presented the school with books and magazines for the library and for use in the boarding halls; Miss A. Theodora Wall, class of 1883, gave to the school a collection of Japanese curios and loaned others; Miss Emily W. Healey of Boston and Miss Susan Minns of Boston gave framed pictures; Mrs. S. E. Campbell, London, Eng., presented two pictures in memory of her daughter, Lemabel, who graduated in 1898; the class of 1904 presented a beautiful glass window, representing the seal of the Commonwealth; the class of 1907 gave money with which to purchase marks for all pictures in the school buildings not now marked; Mrs. Wells, chairman of the Board of Visitors, presented valuable framed pictures; the Massachusetts State Club of the University of Pennsylvania presented a framed picture of groups of the buildings of the university.

#### LECTURES AND ENTERTAINMENTS.

There have been given during the year the following concerts and lectures: by Mrs. Kate Gannett Wells, chairman of Board of Visitors, a talk upon "School Government;" by Miss A. Theodora Wall, class of 1883, who has resided in Japan for a number of years, a lecture upon "Life in Japan;" Miss Lyman of Chicago, who has done a great deal of work in children's libraries, spoke upon "Story Telling," illustrating her talk with stories; Mr. F. L. Burnham, agent of the State Board of Education, addressed the school; Mr. H. W. Lull, superin-

tendent of schools, Newport, R. I., gave a lecture upon "Appreciation of the Teacher;" Dr. C. D. Tenney, who has charge of the education of the Chinese students in this country, spoke to the school upon "Educational Reform in China;" Dr. Johnstone, principal of the School for the Feeble-minded at Vineland, N. J., addressed the school upon the education of the feeble-minded; Mr. Grenville T. Fletcher, formerly agent for the State Board, gave a very instructive lecture upon "The Rural School;" Miss Helen Chandler of Madura, India, spoke upon "Educational System in India;" Dr. Thomas I. Gasson, S.J., president of Boston College, gave a lecture upon "Joan of Arc;" Mr. A. J. Leach of the American Humane Society addressed the school; Miss Frances H. Hunneman, a graduate of the department of household arts, addressed the students of that department upon some of their problems; Mr. and Mrs. Louis Eaton gave a recital with the violin and piano; Miss Virginia E. Graeff spoke to the school upon "The Relation of the Kindergarten to the Elementary Schools;" Mr. J. H. Carfrey, superintendent of schools of Wakefield, Mass., addressed the school upon the "Presidential Election of 1860;" a concert was given by the Glee Club; a division of the senior class, assisted by members of the junior class, gave portions of the "Masque of Pandora;" under the direction of Mr. Archibald, instructor of music, the pupils of the different rooms of the practice school gave a very satisfactory presentation of the work in music as carried on in that school.

#### STATISTICS.

1. Number of pupils admitted September, 1906, 108. Number who graduated in June, 1907, 78; of this number, 75 graduated from the regular two years' course, and 3 from the department of household arts. Whole number of pupils for the year 1906-07, 213. They were divided as follows: seniors, 86; juniors, 125; specials, 2; total, 213.

2. Average age of pupils admitted September, 1906, 18 years, 8 months.

3. Occupations of parents: architects, 2; artist, 1; bookkeepers, 3; brakeman, 1; commercial traveller, 1; clergyman, 1; cashier, 1; coachmen, 2; expressman, 1; farmers, 13; foremen, 8; insurance, 1; inspector of meters, 1; lawyers, 3; laborers, 3; librarian, 1; miner, 1; mechanics, 36; merchants, 16; motorman, 1; postmaster, 1; real estate,

1; school principal, 1; school superintendent, 1; shipper, 1; sea captains, 2; sexton, 1; tax collector, 1; teamster, 1; vocal teacher, 1; total, 108.

4. Residences of 108 pupils admitted September, 1906; Massachusetts: Bristol County, 3; Essex County, 1; Franklin County, 3; Hampshire County, 1; Middlesex County, 57; Norfolk County, 11; Plymouth County, 2; Worcester County, 23; total, 101. From other States: Connecticut, 3; Vermont, 1; New York, 1; Maryland, 1; Nova Scotia, 1; total, 7. From Massachusetts, 101; from other States and countries, 7; total, 108.

KATE GANNETT WELLS,  
THOMAS B. FITZPATRICK,  
*Board of Visitors.*

## STATE NORMAL SCHOOL, HYANNIS.

W. A. BALDWIN, PRINCIPAL.

### INSTRUCTORS IN THE NORMAL SCHOOL.

W. A. BALDWIN, . . . . .	Psychology, pedagogy, history of education.
ANNIE S. CROWELL, . . . . .	Physical training, physiology.
HANNAH M. HARRIS, . . . . .	English, history.
JULIA A. HAYNES, . . . . .	Biology, mathematics.
MINERVA A. LAING, . . . . .	Chemistry, mineralogy, drawing.
CHARLES H. MORRILL, . . . . .	Geography, manual training, physics.
EDMUND F. SAWYER, . . . . .	Vocal music.

### INSTRUCTORS IN THE TRAINING SCHOOL.

A. MONROE STOWE, . . . . .	Principal, eighth and ninth grades.
ANNIE H. CHADWICK, . . . . .	Sixth and seventh grades.
HARRIET C. MOORE, . . . . .	Fifth and sixth grades.
MARY GREGG, . . . . .	Fourth grade.
SARAH S. FORD, . . . . .	Second and third grades.
IDA E. FINLEY, . . . . .	Principal of primary department, first grade.

This school was opened in the fall of 1897, and has therefore been in session for both summer and winter for ten years. During this period the school has been gradually gaining the respect of the educational world, so that it now ranks well up among the normal schools of the country.

### LEAVE OF ABSENCE GRANTED TO MR. BALDWIN.

In recognition of the faithful services of Mr. Baldwin, the principal, the State Board of Education granted him leave of absence during the current school year. This time is being spent by himself and his family in travel and study in Europe.

### A LOYAL FACULTY AND SUPERINTENDENT.

The school is fortunate in having a faculty so efficient and so loyal that the work of the school year will continue on a high plane in the absence of Mr. Baldwin, without assistance from outside except such as the superintendent of schools of Barnstable, Mr. George H. Galger, has kindly volunteered to give. Mr. Charles H. Morrill, the acting principal for the year, has been a teacher in the school for three years, and is in thorough sympathy with its spirit and policy.

## THE RESIGNATION OF MISS BROWN.

Miss Bertha M. Brown, who has been with the school from the first, and who has helped to build it up to its present state of efficiency, has felt obliged to resign on account of continued ill health. Miss Brown has made valuable contributions to educational literature in both physiology and in school garden work. All of the friends of the school feel that it has met with a distinct loss, but that her work and personality will be forever associated with the school.

Miss Julia A. Haynes, a graduate of the University of Michigan, and a teacher of large experience, has been selected to fill the place left vacant by the resignation of Miss Brown.

## CHANGES IN THE TRAINING SCHOOL FORCE.

Mr. William F. Johnson, the efficient principal of the training school, resigned to accept a much larger salary in the town of Wellesley, Mass. Mr. Ansel Monroe Stowe has been selected to take his place. Mr. Stowe is a graduate of the Northwestern University, and has earned degrees at Harvard and at Columbia universities.

After two years of strong work, Miss Gertrude M. Wilcox resigned to accept a position in Milton, Mass. Miss Harriet C. Moore, a graduate of Mount Holyoke College, a student of the Hyannis summer session for two summers, and for the past year the principal of a village school in New Hampshire, has been selected as Miss Wilcox's successor.

Miss Mabel M. Kimball, who has been a teacher in the school for six years, and has for a large part of that time been principal of the primary department and supervisor of the industrial work, resigned, to become the wife of a prominent merchant of Hyannis. Fortunately, she is willing to continue to direct a part of the industrial work. Miss Mary Gregg, a graduate of Oswego Normal School, and for the last seven years a teacher in the Rutgers Preparatory School, has been selected to fill this vacancy.

## SCHOOL GARDEN WORK.

The way in which the school garden work is made the basis for nearly all other subjects in the training school continues

to attract the interest of many intelligent men. This is shown by many requests, from all over this country and from other countries, for copies of the catalogue of 1905, which describes this work, and by the visits of special teachers who are particularly interested in this line of school work.

### POULTRY RAISING.

For several years a few of the children of the training school who were unhappy because they could not be given work in the school garden have been comforted by being allowed to set a hen and to rear some chickens. During the past year this work has been considerably increased. An incubator has been purchased, and over two hundred chickens have been reared. An attempt is being made to put chicken rearing upon a basis similar to that of the school garden on the educational side, and at the same time to afford one or two of the students of the normal school an opportunity for self-support on the economic side. Only a beginning has as yet been made, and the matter is in the experimental stage.

### THE POULTRY HOUSE.

In anticipation of the needs of the poultry department, the manual training department of the school has been devoting itself to the construction of a poultry house. The plans were adapted from a description of the latest style of a poultry house constructed at the Maine Agricultural College. It has been built chiefly out of material which had been used once in connection with the construction of the coal pocket which was described in last year's report. The work has largely been done by students and instructors. A first-class mason was employed to direct the laying of the walls and floor, and it was found that it would be necessary to employ a carpenter for a short time to complete the interior in time for use. Thus, by utilizing the energies of the manual training class for something useful, instead of allowing them to be dissipated upon useless models of the regulation manual training type, and by adding a small sum of money to that formerly expended for lumber to make such useless models, it has been found possible to construct a thoroughly modern poultry house, while giving the students a much better kind of training. A practical illustra-

tion has also been given of what can be done along the newer lines of industrial education such as is being advocated by this school.

### STATISTICS.

1. Number of students registered Sept. 12, 1907: men, 6; women, 38; total, 44.

2. Number of students registered since Sept. 9, 1897: men, 56; women, 329; total, 385.

3. Average age of entering class when admitted: 19 years.

4. Number who have had experience as teachers, 4.

5. Residence of pupils: Barnstable County, — Barnstable, 9; Bourne, 2; Eastham, 1; Falmouth, 1; Sandwich, 1; Provincetown, 2; Wellfleet, 1; Yarmouth, 1; total, 19; Bristol County, — North Easton, 1; Dukes County, — Vineyard Haven, 1; Franklin County, — Colrain, 1; Middlesex County, — Reading, 1; Norfolk County, — Walpole, 1; New Hampshire, 1; Peru, 1.

6. Occupation of pupils' parents: merchants, 3; blacksmiths, 2; fishermen, 2; laborer, wreck master, postmaster, junk dealer, engineer, carpenter, restaurant keeper, insurance agent, civil engineer, wire drawer, section foreman, gardener, clergyman, superintendent of cable company, each 1.

### THE SUMMER SESSION.

The summer session of the school continues to attract an ever larger and more select class of teachers, supervisors and superintendents. During the past summer about 17 superintendents were present, and a large number of supervisors of drawing and manual training and several teachers of schools for defectives. These are among the most enthusiastic members of the school. As they come year after year, they become imbued with the spirit of the school and carry it into their own schools. The Hyannis Normal School is thus touching and helping to tone up the work of the schools in all parts of the State. Those who come tell others, and the school is having a natural and steady growth. The limit of the number of those who can be readily accommodated in the village seems to have been reached. During the past summer about ten lived at the Yarmouth camp ground, and two parties lived in tents by the seashore. Plans are under consideration for the formation of a camp of tents or canvas houses, in which superintendents who desire to bring their families may find inexpensive accommodations.

The faculty of the summer session consisted of the following:—

W. A. BALDWIN, . . . . .	Principal.
EDMUND F. SAWYER, . . . . .	Instructor in music, State Normal School, Hyannis.
MARY E. LAING, . . . . .	Formerly instructor in pedagogy, State Normal School, Oswego, N. Y.
CHARLES P. SINNOTT, . . . . .	Instructor in geography, State Normal School, Bridgewater.
FRED H. DANIELS, . . . . .	Supervisor of drawing, Springfield.
DIXIE LEE BRYANT, . . . . .	Instructor in botany, State Normal School, Hyannis.
MABEL M. KIMBALL, . . . . .	Supervisor of industrial work, Hyannis.
CLARENCE F. CARROLL, . . . . .	Superintendent of schools, Rochester, N. Y.
JOHN DEWEY, . . . . .	Professor of philosophy, Columbia University, New York.
C. N. KENDALL, . . . . .	Superintendent of schools, Indianapolis, Ind.
CHARLES H. MORRILL, . . . . .	Instructor in geography, State Normal School, Hyannis.
GERTRUDE E. BIGELOW, . . . . .	Instructor in arithmetic, Boston Normal School.
ELIZABETH H. SPALDING, . . . . .	Formerly instructor in English, Pratt Institute, Brooklyn, N. Y.
ANNIE S. CROWELL, . . . . .	Instructor in physical training, State Normal School, Hyannis.

Graduates, summer session, 1907:—

EVERETT G. LORING, . . . . .	Superintendent of schools, Kingston, graduate of Bowdoin.
LEON O. MERRILL, . . . . .	Superintendent of schools, Pittsfield, N. H., attended Harvard.
BELLA H. MURRAY, . . . . .	Graduate of two years' course, State Normal School, Hyannis.
ARTHUR B. WEBBER, . . . . .	Superintendent of schools, Littleton, graduate of Harvard.

The following statistics may also be of interest:—

Number of students, . . . . .	210
Average age (years), . . . . .	30
Average years of experience, . . . . .	8
Number of students graduated from college, . . . . .	26
Number of students graduated from normal schools, . . . . .	63
Number of students graduated from training classes, . . . . .	22
Number of students graduated from high schools, . . . . .	111
Number of students who had attended college, . . . . .	14
Number of students who had attended normal schools, . . . . .	54
Number of students working for a diploma, . . . . .	65

CAROLINE HAZARD,  
GEORGE I. ALDRICH,  
*Board of Visitors.*



## STATE NORMAL SCHOOL, LOWELL.

FRANK F. COBURN, PRINCIPAL.

## INSTRUCTORS IN THE NORMAL SCHOOL.

FRANK F. COBURN, . . . . .	Psychology, principles of education.
HUGH J. MOLLOY, . . . . .	Physics, chemistry and arithmetic.
MABEL HILL, . . . . .	History, civil government and history of education.
ANNA W. DEVEREAUX, . . . . .	Kindergarten theory and practice and child study.
MARY HUSSEY, . . . . .	Reading, vocal training and physical culture.
MABEL C. BRAGG, . . . . .	English grammar, rhetoric and literature.
SARAH C. WHELTON, . . . . .	Music.
CLARENCE M. WEED, . . . . .	Nature study and physiology.
NANCY M. BRAGG, . . . . .	Geography, algebra and geometry.
JOSEPHINE W. CHUTE, . . . . .	Drawing and manual training.

## INSTRUCTORS IN THE MODEL SCHOOLS.

*Lowell Division.*

CYRUS A. DURGIN, . . . . .	Principal
BELLE A. PRESCOTT, . . . . .	Assistant.
CHARLOTTE M. MURKLAND, . . . . .	Assistant.
BELLE F. BATCHELDER, . . . . .	Assistant.
BLANCHE A. CHENEY, . . . . .	Assistant.
AMY L. TUCKE, . . . . .	Assistant.
MARIA W. ROBERTS, . . . . .	Assistant.
MARY G. WALSH, . . . . .	Assistant.
CAROLINE H. MCGARVEY, . . . . .	Assistant.
KATHERINE FARLEY, . . . . .	Assistant.
ALICE D. SUNBURY, . . . . .	Assistant.
FRANCES CLARK, . . . . .	Assistant.
A. GERTRUDE STILES, . . . . .	Assistant.
SARA E. AMES, . . . . .	Assistant.
ESSIE E. ROCHE, . . . . .	Assistant.
BRIDGET SMITH, . . . . .	Assistant.
MARY C. LADD, . . . . .	Assistant.
E. BELLE PERHAM, . . . . .	Kindergarten.
EDITH A. ANDREWS, . . . . .	Assistant kindergarten.
JOSEPHINE W. CHUTE, . . . . .	Drawing.
SARAH C. WHELTON, . . . . .	Music.
ETHEL E. KIMBALL, . . . . .	Assistant.

*Lawrence Division.*

LEILA M. LAMPREY, . . . . .	Principal.
ELLA F. EASTMAN, . . . . .	Assistant.
ANNIE L. O'CONNOR, . . . . .	Assistant.
EMMA J. GREENWOOD, . . . . .	Assistant.
MARY E. MAHONEY, . . . . .	Music.
HARRIET A. MCKONE, . . . . .	Assistant.
NELLIE S. WINCHESTER, . . . . .	Assistant.
H. FRANCES McDONNELL, . . . . .	Assistant.
MARY A. MAHONEY, . . . . .	Assistant.
GRACE L. CONLIN, . . . . .	Assistant.
MABEL L. MULLEN, . . . . .	Assistant.
LAURA K. PRESCOTT, . . . . .	Assistant.

E. MABEL ANDREWS, . . . . .	Assistant.
ELLEN C. TOBIN, . . . . .	Assistant.
ETHEL C. RAMSEY, . . . . .	Assistant.
ADA B. LOCKE, . . . . .	Assistant.

*North Tewksbury Division.*

TIRZAH SWIFT MORSE, . . . . .	Principal.
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## IN GENERAL.

There is but little to record of new importance in the year's history of the State Normal School at Lowell, Mass. The faculty, under difficult circumstances, has worked with a whole-hearted desire to make the year a successful one in regard to the progress of the pupils.

The higher academic standards of the incoming high school graduates and the consequent higher standard of the work of our junior and senior years, of which we spoke with special emphasis in the last report, holds true for the present. We have faith that a continuous and steady advance in scholarship in the secondary schools will give the normal schools opportunity to develop a high grade of graduated teachers. When every young man and woman who has selected the profession of teaching has the equipment of well-ordered knowledge and the art of interpretation, together with sane and wholesome character, then we need have no further anxiety for public instruction throughout the country. Until we can be assured of such conditions, it is our duty to plead for better secondary training, and our duty to make the profession of teaching more and more a profession which shall rank with that of the ministry and of the law.

## MODEL SCHOOLS.

The work, discipline and administration of the two model schools connected with the State normal school are of unusual excellence. Miss Lamprey, principal of the Hood school, has an unusual talent for producing excellent scholarship in those under her charge, and in inspiring them with enthusiasm for their future profession.

Mr. Durgin, principal of the Bartlett school, each year raises the standard of attainment, and his pupils are so happy and thorough in whatever they do that the school has become a truly remarkable model school.

The equipment for the teaching of domestic science in the fifth to the ninth grades of the Bartlett school is now complete, and only awaits the necessary funds by which its teaching will be assured. The equipment, although complete, has been limited to what is strictly essential.

Manual training for the boys has been carried on successfully.

Under the supervision of the biological department, the school gardens and the care of individual flower beds, both indoors and out, has become an interesting feature of school life in the normal and practice departments.

#### RURAL SCHOOL.

In June, 1907, arrangements were made at North Tewksbury, Mass., to include a rural school of that town as part of the normal practice department, and in the following September the school was opened, with Miss Morse as head. This school is jointly supported by the State and the town of Tewksbury. It is rapidly adjusting itself to the needs of the practice department by the increased scope and ability which it gives to normal pupils.

The introduction of rural school training into a normal school curriculum is of great value, as by such enlargement the country towns themselves will be benefited.

#### THE KINDERGARTEN.

Owing to the change in the residential character of the city in the vicinity of the normal school, there is not a sufficient number of children to justify the maintenance of the kindergarten in the normal school building. The kindergarten has therefore been moved to the Cross Street schoolhouse, where Miss Perham and Miss Andrews still continue as its efficient teachers.

#### GIFT OF THE GRADUATING CLASS.

A bust of Homer, which has been placed in the history room, was presented to the school by the graduating class in June, 1907.

## LECTURES.

An admirable course of four lectures on hygiene is now being given by Dr. Katherine Law of Boston.

The graduating address was given by Prof. Arlo Bates of the Massachusetts Institute of Technology.

## THE LIFE OF THE SCHOOL.

With the close of this year's work the tenth year of the Lowell State Normal School will have been rounded out. What the school has accomplished in its first decade will be recognized through its body of graduated teachers, who are actively employed in teaching, not only in Massachusetts, but here and there in towns and cities throughout the country.

The spirit of loyalty to the Alma Mater is more and more in evidence each year, as the alumni rally together for their annual banquet in May. The reunions of 1906 and 1907 were especially large, and representative of the classes already gone out to professional service.

The social life of the undergraduate students tends towards a culture that is felt to be necessary in the schoolroom as much as in the home life. Afternoons of literary and musical programs, followed by informal intermingling of students and faculty, with guests occasionally, give, it is believed, an impetus to graciousness and cordiality.

## THE NEEDS OF THE SCHOOLS.

During the first decade of the Lowell Normal School the State has furnished means for adequate and generous equipment of the various departments. The grounds have been completed as to every detail, — drainage, lawns, tennis court, shrubberies and flower gardens. For the future the expense of maintenance will be the only further need for appropriation connected with the outside of the State school.

But with the beginning of the eleventh year it is hoped that a special appropriation will be made for the interior of the building. The walls and ceilings have never been colored, and

as time has gone on, the ravages of wear and tear have left their marks upon every room.

It would be an inspiration to faculty and pupils alike if the building, as a whole, should receive an ample gift from the Legislature, whereby a fitting and beautiful scheme of decoration could be carried out.

#### STATISTICS.

1. Number of students for year, 149.
2. Number in entering classes: junior, 57; senior, 1; special, 4.
3. Number of graduates for the year, 67.
4. Total number of graduates, 538.
5. Whole number of students admitted since the opening of school, 862.
6. Average age of pupils admitted, 18 years.
7. Of the entering class, Middlesex County is represented by 8 towns, Essex County by 5 towns. Lowell furnishes 11 pupils; Lawrence, 17; Haverhill, 7; Woburn, 6; Georgetown, 2; Bradford, 2; Methuen, 2; Chelmsford, 2; Somerville, 2; Andover, Graniteville, Melrose, North Billerica, Pelham, N. H., Salem Centre, N. H., 1 each.
8. Occupations of pupils' fathers: merchants, 10; city officials, 4; farmers, 4; salesmen, 3; shoe cutters, 3; foremen, 3; machinists, 2; manufacturers, 2; wool sorters, 2; laborers, 2; painter, 1; mason, 1; switch tender, 1; millwright, 1; teamster, 1; lumberman, 1; milk dealer, 1; conductor, 1; physician, 1; real estate dealer, 1; not reported, 12.

THOMAS B. FITZPATRICK,  
KATE GANNETT WELLS,

*Board of Visitors.*

## STATE NORMAL SCHOOL, NORTH ADAMS.

## FRANK FULLER MURDOCK, PRINCIPAL.

## INSTRUCTORS IN THE NORMAL DEPARTMENT.

FRANK F. MURDOCK, . . . . .	Psychology, pedagogy.
ROLAND W. GUSS, . . . . .	Natural science.
LYMAN R. ALLEN, . . . . .	History, geography.
WILLIS B. ANTHONY, . . . . .	Industrial training.
MARY A. PEARSON, . . . . .	Drawing.
ROSA E. SEARLE, . . . . .	Mathematics, music.
ANNIE C. SKEELE, . . . . .	Physiology, physical culture.
MARY L. BARIGHT, . . . . .	English, reading.

## MARK HOPKINS TRAINING SCHOOL.

*Instructors in the Grammar and Primary Departments.*

DONNA D. COUCH, . . . . .	Principal.
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## School organization and management in the normal department.

J. ANGELINE SMITH, . . . . .	Ninth grade.
J. VIDA SPEAR, . . . . .	Eighth grade.
WINIFRED I. WRIGHT, <sup>1</sup> . . . . .	Seventh and eighth grades.
HANNAH E. MAGENIS, . . . . .	Seventh grade.
E. IDELLA HASKINS, <sup>1</sup> . . . . .	Sixth grade.
ETHEL M. PLUMB, <sup>1</sup> . . . . .	Sixth grade.
EMILY D. STACY, . . . . .	Fifth grade.
FREELOVE CLARK, . . . . .	Fourth and fifth grades.
AGNES E. WALKER, . . . . .	Fourth grade.
SUSAN G. LOMBARD, . . . . .	Third grade.
IDA R. CHAPIN, <sup>1</sup> . . . . .	Third grade.
EMMA H. TINGUE, . . . . .	Second grade.
EDITH A. ROOT, . . . . .	Second grade.
ANNIE J. LAMPHIER, . . . . .	First grade.
FLORENCE M. McVEY, . . . . .	First grade.
INEZ B. INGRAHAM, <sup>1</sup> . . . . .	Assistant first grade.
ALICE G. BARRETT, <sup>1</sup> . . . . .	Assistant first grade.

*Instructors in the Kindergarten Department.*

ELIZA GRAEME GRAVES, . . . . .	Principal.
ELVA L. BROWNSON, . . . . .	Assistant.
JENNIE M. BUSHNELL, <sup>1</sup> . . . . .	Assistant.

## RURAL TRAINING SCHOOL, CLARKSBURG.

HANNAH P. WATERMAN, . . . . .	Principal, grammar department.
NELLA H. COLE, <sup>1</sup> . . . . .	Primary department.

## RURAL TRAINING SCHOOL, WILLIAMSTOWN.

BESSIE W. NICHOLS, . . . . .	Principal, grammar department.
ANNA R. CAMPBELL, <sup>1</sup> . . . . .	Primary department.

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<sup>1</sup> These teachers do not conduct practice teaching by the students.

## TEACHERS.

Training schools are established to secure to normal school students well-directed study of children and practice in teaching, and to ensure sound professional attitudes. Not the less should a training school advance the professional power and influence of the whole faculty. The faculty at this normal school consists of four groups. The first and second groups are of equal responsibility. The first group includes those members of the faculty whose work is the instruction of students in relation to subjects. The second group includes those members whose work is the direction of students in their study and teaching of children. The third group consists of regular teachers, having full charge of classes of children but not of students. The fourth group consists of newly graduated students, who remain, at small salaries, to specialize as kindergartners or teachers of first primary classes.

Members of the third and fourth sections of the faculty are in direct line of promotion to the higher positions for the instruction of students. Teachers in these groups are also in quick demand by superintendents and principals, and secure easily positions of more responsibility and higher salaries. The influence of these less advanced teachers upon the more experienced members of the faculty has been to emphasize the principle that professional honor does not continue to him who does not make and show continuous professional growth.

Miss Harriet P. Ryder of the ninth grade resigned to accept the principalship of a large school in Arlington. She was succeeded by Miss J. Angeline Smith, formerly of the training school at Framingham, and recently principal of the central school in Hopedale. Miss Althea E. Hyde of the eighth grade resigned to be married. Miss Mary L. Perley of the seventh grade resigned to accept the charge of an eighth grade in a public school in Cambridge, and in her stead has been appointed Miss Winifred I. Wright, who was assistant in the ninth grade. Miss E. Idella Haskins has been appointed to the sixth grade, in place of Miss Hannah P. Waterman, transferred to the principalship of the new rural training school in Clarksburg.

Miss Lucy B. Kemp of the sixth grade resigned to become assistant matron of Taconic Hall. Miss Ethel M. Plumb, recently teaching in Clarksburg, took her place. Miss Eloise A. Gaston of the fifth grade resigned for reason of health. Miss Annie M. McKenzie of the third grade resigned at the close of her leave of absence, and remained to teach among her friends in Seattle. Miss Susan G. Lombard was transferred to the third grade, and Miss Agnes E. Walker, formerly of our faculty, returned and assumed charge of the fourth grade. Miss Gertrude E. March, assistant in the kindergarten, and Misses Hills and Boyd, assistants in the first primaries, resigned to accept high salaries in other cities. They are succeeded respectively by Miss Jennie M. Bushnell, Miss Inez B. Ingraham and Miss Alice G. Barrett, graduates of this school.

#### RURAL TRAINING SCHOOLS.

In accordance with the general plan presented to and approved by the Board of Education for the conduct of rural training schools, two such schools have been established.

In the town of Williamstown arrangements were made for the use of the Broad Brook school, which is in an agricultural community. The grades one, two and three form the primary class, and grades four, five and six the grammar class. Each class numbers about 35 pupils. For the present only the grammar class will be used for training purposes. Miss Bessie W. Nichols has been appointed principal; Miss Anna R. Campbell has been retained in charge of the primary class.

With the town of Clarksburg an agreement was made for the use of the Briggsville school, which is in a mill village. The primary class includes grades one to four, and the grammar class grades four to eight, inclusive. Each class numbers about 40 children. Miss Hannah P. Waterman was transferred from the sixth grade to the principalship of this school; Miss Nella H. Cole was appointed to the charge of the primary school. The primary class in each school will not be used at present for training purposes.

Each of these schools is on the electric car line, the Briggsville school being distant a little less and the Broad Brook



school a little more than a half hour's ride. For the Briggsville school the town is building a modern two-room building. The Broad Brook school building requires some further repairs to make it serve for training purposes in the best way.

Both towns have welcomed the coming of the normal school, and adaptations for the new work have been made to the full extent of their power, and most willingly. Supt. W. G. Mitchell of Williamstown and Supt. F. B. Van Ornum of Clarksburg have been zealous in the co-operation for the establishment and maintenance of these schools. To their good will and good sense much of the success of these new efforts will be due.

The terms of the agreement with the two towns are the same. The agreement with the town of Clarksburg is as follows: —

AGREEMENT FOR THE CONDUCT OF A SCHOOL OF OBSERVATION AND PRACTICE IN CONNECTION WITH THE STATE NORMAL SCHOOL, NORTH ADAMS, MASS.

*This agreement* is made and entered into this first day of April, in the year one thousand nine hundred and seven, by and between the town of Clarksburg, in the county of Berkshire and Commonwealth of Massachusetts, acting through the school committee of said North Adams, thereto duly authorized, and the State Board of Education, acting for and in behalf of the Commonwealth of Massachusetts, to establish and maintain a school of observation and practice, upon the following terms: —

SECTION 1. The town of Clarksburg agrees: —

1. To the use of the Briggsville school by the North Adams Normal School as a school of observation and practice.

2. To include within the same primary and grammar grades sufficient to constitute a rural training school.

3. To furnish, heat, clean and repair the buildings, and care for the grounds.

4. To provide teachers not exceeding in number the number of rooms.

5. To pay to the teachers in each room of said school a salary equal to the highest paid by the town to any other teacher of one or more of the grades represented in the respective rooms of the said school.

6. To expend for text-books, supplies and apparatus for the said school sums of money which shall be, in each year, that proportional part of the total expenditure by the town for text-books, supplies and apparatus, excluding those furnished the high school, which the average yearly number of pupils of the Briggsville school is of the average

yearly number of pupils attending all the schools of the town excluding the high school.<sup>1</sup>

7. To maintain a school of such a size as will provide pupils for each room to a number not inconsistent with the welfare of the pupils and the use of the class for the said purpose of observation and practice.

8. All and each of the above provisions shall be satisfactory to the Board of Education of the Commonwealth of Massachusetts.

SECTION 2. The Commonwealth of Massachusetts agrees:—

1. To use the Briggsville school as a school of observation and practice in such a manner as to equal at the least the general educational requirements of the school committee of the town of Clarksburg.

2. To pay to the teachers of the said school, in addition to the amount paid by the town of Clarksburg, such salaries as shall be necessary to provide teachers qualified for the peculiar work of the said school.

3. To expend for text-books, supplies and apparatus, in addition to the money expended by the town of Clarksburg for the said purpose, such sums of money as shall be necessary for the proper conduct of the said school as a school of observation and practice, such material to be marked "Property of the State Normal School, North Adams, Mass."

4. All and each of the above-named provisions shall be with approval of the school committee of the town of Clarksburg.

SECTION 3. It is further mutually agreed by the town of Clarksburg and the Commonwealth of Massachusetts:—

1. That all teachers of the school of observation and practice shall be nominated by the principal of the normal school, subject to approval and election by the said school committee and Board of Education.

2. That all courses of study, text-books and changes therein shall be approved by the principal of the normal school and the superintendent of schools, subject to the approval of the school committee of said town.

3. That all matters of promotion, discipline, attendance and truancy shall be under the care of the school committee of said town.

SECTION 4. It is finally mutually agreed by the town of Clarksburg, Mass., and the Commonwealth of Massachusetts:—

1. That this agreement shall be subject to such modifications as shall be agreed upon hereafter by the said town and Commonwealth.

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<sup>1</sup> NOTE.—The proportional part which the average yearly number of pupils of the Briggsville school is of the average yearly number of pupils attending all the schools of the town, excluding the high school, is computed at the close of each school year in June, and is applied to the sums of money expended for text-books, supplies and apparatus for all schools, excluding the high school, during the fiscal year ending November 30 of the same calendar year. The proportional sum of money thus ascertained is the sum expended during the ensuing fiscal year for text-books, supplies and apparatus for the (Briggsville school) School of Observation and Practice. The said sums of money are expended in accordance with the request of the principal of the normal school, subject to the provisions of section 3, part 2.

2. That this agreement does not prevent further provision for "model and practice schools" in a manner to be agreed upon mutually by the said town and Commonwealth.

#### GARDENING.

For the past five years no feature of industrial education has been of more value to the pupils of the training school than gardening, and this in spite of severe limitations. Actual gardening has developed not only skill in production, but also knowledge and appreciation of the laws of growth to a kind and degree of success possible in no other way. Other noteworthy results have been the cultivation of foresight, regular attention, hand skill, valuation of effort, appreciation of nature's methods, and the understanding of agricultural life.

Students in the normal school have for their course in botany individual instruction and practice in growing bulbs, green-wood cuttings, seed; preparation each of a garden plot 5 by 15 feet; planting of vegetables and flowers; harvesting of products, and arranging of the same for household decoration and exhibition at the local fair. These students practise what constitutes school gardening as a part of their industrial education, and have some opportunities to instruct the children.

All the advantages of gardening are severely restricted by lack of sufficient funds to prepare additional ground; to provide for summer instruction of children in their school gardens; to promote home gardening; moreover, to provide an advisor to superintendents and teachers, to the end of securing the instruction and practice of the elements of agriculture in the schools of farming communities.

The normal schools should provide full professional opportunities for the preparation of teachers of gardening at least in elementary schools. Co-operation with the Massachusetts Agricultural College at Amherst has been carefully considered, and joint efforts are entirely feasible and are heartily desired by both institutions. Tentative plans have been approved by the visitors of this normal school and of the college. It is recommended that a special appropriation be asked for, to secure this professional preparation for the teaching of agriculture.

## STEPS.

The four flights of wooden steps leading up the west terraces to the main entrance are seriously decayed and beyond repair. They should be replaced by concrete. The expense of the same will be too great to include it as a proper item in the annual appropriation. It is asked that a special appropriation to this end be requested of the Legislature.

## STATISTICS.

Statistics for the year ending Aug. 31, 1907, are as follows:—

1. Number admitted in September, 1906: regular courses, 37; special courses, 5; vacation study, 18,—all women. Whole number enrolled during the year, 96. Number of graduates, 31.

2. Average age of entering class, 19 years, 7 months.

3. Whole number of students who have been members of the school, 568.

4. Number of students from Massachusetts: Berkshire County, 52; Franklin County, 10; Hampshire County, 6; Hampden County, 5; Middlesex County, 1; Connecticut, 2; New York, 2; Vermont, 1. Cities and towns represented: Massachusetts, 29; scattering, 6.

5. Occupation of parents: farmers, 16; superintendents and foremen, 6; grocers, 3; merchants, 3; laborers, 4; carpenters, 3; livery stable proprietor, principal of high school, carriage builder, piano agent, inspector of cloth, jeweler, wholesale grocer, engineer, blacksmith, lumberman, insurance agent, railroad agent, barber, gas business, janitor, loom fixer, boiler maker, boiler tender, liveryman, painter, bricklayer, nurse, plumber, millwright, fireman, bookkeeper, furniture dealer, gardener, accountant, geologist, paper maker, trainman, each 1; unknown, 2; deceased, 10.

CLINTON Q. RICHMOND,  
ALBERT E. WINSHIP,

*Board of Visitors.*

## STATE NORMAL SCHOOL, SALEM.

J. ASBURY PITMAN, PRINCIPAL.

### INSTRUCTORS IN THE NORMAL SCHOOL.

JOSEPH ASBURY PITMAN, . . . . .	Theory and practice of teaching, history of education.
HARRIET LAURA MARTIN, . . . . .	Algebra, geometry, Latin.
JESSIE PUTNAM LEAROYD, <sup>1</sup> . . . . .	English, gardening.
CHARLES EUGENE ADAMS, <sup>1</sup> . . . . .	Geology, physics, chemistry.
CHARLES FREDERICK WHITNEY, <sup>1</sup> . . . . .	Drawing.
WILLIAM CHARLES MOORE, S.B., <sup>1,2</sup> . . . . .	Geology, geography.
MARY ALICE WARREN, <sup>1</sup> . . . . .	Biology, physiology, physical training.
GERTRUDE BROWN GOLDSMITH, A.B., <sup>1</sup> . . . . .	Biology, psychology.
FRANCES BOUTELLE DEANE, <sup>1</sup> . . . . .	History, English.
HELEN HOOD ROGERS, <sup>1</sup> . . . . .	Reading, physical training.
CASSIE LUCRETIA PAINE, . . . . .	Critic.
FRED WILLIS ARCHIBALD, <sup>1</sup> . . . . .	Music.
CHARLES EDWARD NEWELL, <sup>1</sup> . . . . .	Manual arts.
HARRIET EMMA PEET, <sup>1</sup> . . . . .	Literature, arithmetic.
LOUISE CAROLINE WELLMAN, . . . . .	Secretary, librarian.

### INSTRUCTORS IN THE PRACTICE SCHOOLS.

ALTON CLIFFORD CHURBUCK, . . . . .	Principal, eighth grade.
MAUD SARAH WHEELER, . . . . .	Seventh grade.
MARJORIE HUSE, . . . . .	Sixth grade.
BESSIE JORDAN WELCH, . . . . .	Fifth grade.
MABEL LUCILE HOBBS, . . . . .	Fourth grade.
MARY ELIZABETH JAMES, . . . . .	Third grade.
DELIA FRANCES CAMPBELL, . . . . .	Second grade.
HELEN MERRILL DILLINGHAM, . . . . .	First grade.
SUSAN ELLEN ROPES, <sup>3</sup> . . . . .	First grade.

### INSTRUCTORS IN THE KINDERGARTENS.

LOUISE FARRINGTON, . . . . .	Normal school building.
ALICE MARTHA WYMAN, . . . . .	Bertram school, Willow and Summit avenues.

### GENERAL PROGRESS.

Yearly reports are apt to become like roads without signposts at the crossings. The indication of a few flying arrows may serve to direct attention to what the Board of Visitors considers significant of paths of advance at the Salem Normal School.

1. The office of librarian has been combined with that of secretary, and the expense of the staff has thereby been reduced.

<sup>1</sup> These teachers also teach and supervise in the practice school.

<sup>2</sup> Absent on leave; Sumner Webster Cushing, A.M., substitute.

<sup>3</sup> Bertram school, Willow and Summit avenues.

2. The practice school has been brought into closer connection with the Bertram school, and, through the co-operation of the Salem school committee, the normal school has the privilege of taking charge year by year of an additional room.

3. Manual training, including wood working, sewing and gardening, has been developed during the year.

4. The Normal School has been offered the opportunity of taking charge of a rural school in Marblehead as a model ungraded school.

#### THE FACULTY.

The following changes in the faculty have occurred during the year: Isabella G. Knight, librarian, Sarah L. Baker, teacher of arithmetic and English, and Maud Oldham, teacher of literature, resigned at the close of the school year. Louise C. Wellman, recently of the Penn Charter School, has been engaged as secretary and librarian; and Harriet E. Peet, formerly supervisor of English in the Forestville school, Chicago, has been secured to teach literature and arithmetic. Frances B. Deane, who has been employed as secretary and teacher of history, now devotes her entire time to teaching, a portion of the work in English having been added to her program. Through this arrangement the number of teachers has been diminished without impairing the efficiency of the school.

William C. Moore, teacher of geography, has been granted a leave of absence for the year; and Sumner W. Cushing, formerly teacher of geography in the Technical High School, Providence, has been engaged as his substitute.

Susan E. Ropes, for several years a teacher in the Upham school, in this city, has been selected to teach the first grade in the Bertram school, which is now a part of our system of practice schools.

#### PROFESSIONAL IMPROVEMENT.

Through the inspection of other schools and by pursuing special courses of instruction in their several subjects, the members of the faculty are constantly striving to render more efficient service. Faculty meetings and frequent conferences of teachers of related subjects are another important means of professional

improvement, and they have also resulted in producing a desirable degree of unity in the organization of the course of instruction.

#### THE COURSE OF STUDY.

The most important changes in the course of study have been the introduction of a course in methods in Latin, open as an elective to seniors and special students, and the development of the industrial work.

A course in manual training leading to the more difficult work required in the grammar grades has been planned for the primary classes. Instruction in sewing is now given the girls while the boys are employed in the manual training room. The garden has been a source of much interest, and its needs have determined, to a considerable extent, the character of the course in wood working.

It is the aim of the course for the normal students to give them a practical knowledge of such forms of manual training as they may teach without expensive equipment, and to enable them to acquire such a degree of manual skill that they can construct much of the simple apparatus that they may require in their teaching.

#### OBSERVATION AND PRACTICE.

There has been a serious attempt to establish closer relations between the normal and the practice schools, in order that the conditions in the latter may be a practical expression of the theories taught in the former.

Departmental instruction in the grammar grades has been discontinued, it having been found to the material disadvantage of the pupils to receive instruction from as large a number of different teachers as this plan of work necessitated. The practice teaching has also been more carefully planned and supervised, since each normal student has been made responsible to but a single grade teacher.

The system of practice schools has been extended by the addition of another first grade in the Bertram primary school. The children in this class were trained in the kindergarten under our direction, and they will remain under our care

through the fourth grade, the Salem school committee having placed this school at our disposal upon the condition that we shall assume control of one additional room each year. This arrangement removes any possibility of congestion in the practice school, and affords ample facilities for observation and practice in the kindergartens and the primary grades.

Further opportunity for practice has been provided through an arrangement with the school committee and the principal of the Pickering school, whereby one member of the senior class is sent to the school each week to serve in the capacity of assistant, under the supervision of the principal and of a teacher of long and successful experience.

In addition to this, a considerable number of the seniors have been volunteer workers in the evening classes at the Salem Fraternity, a charitable organization maintained for the benefit of boys and young men, the majority of whom are of foreign birth.

The school also responds to a large number of calls for substitute teachers who are required for limited periods in cities and towns in the vicinity of the school.

The town of Marblehead has placed at our disposal one of their rural schools, to be used for observation purposes as a model ungraded school. It is believed that this training will be valuable to all students, but especially to those who may begin their teaching experience in schools of this character.

#### LECTURES.

The following lectures have been delivered before the school during the past year:—

Utilization of Museums of Art by Schools and Colleges, — Mr. Walter Sargent.

The School as a Social Force, — Rev. Walter Scott.

Relations between Teachers and Supervisors, — Mr. Frederic L. Burnham.

What a City owes to its Boys, — Hon. George H. Martin.

The New England Poets, — Supt. J. H. Carfrey.

School Management, — Mr. G. T. Fletcher.

Industrial-Social Education, — Prin. W. A. Baldwin.

Ideals of Womanliness, — Mrs. Ella Lyman Cabot.

Education for Efficiency, — Mr. James P. Munroe.



Patriotism and the New Internationalism, — Mrs. Lucia Ames Mead.  
Memories of the Civil War, — Hon. Alfred S. Roe.  
Graduation Address: Effective Personalities, — Rev. Samuel M. Crothers, D.D.  
Music and Verse in the Public Schools, — Mrs. Jessie L. Gaynor, Mrs. Alice C. D. Riley.

#### THE TRIENNIAL REUNION.

The triennial meeting of the alumni association was held at the school in June. The attendance was large, and the program was one of unusual interest and profit. The loyalty of the alumni found practical expression in generous contributions to the existing funds for the aid of needy students by individuals and by classes, and the sum of \$200 was appropriated from the treasury of the association. It was also proposed that similar funds should be established in memory of two of the former principals, — Professor Crosby and Dr. Hagar, — and committees representing their respective graduates were appointed to solicit money to be applied to this purpose. It was voted that hereafter all of the funds existing for the benefit of students in need of pecuniary aid shall be administered by the principal as loan funds.

#### GIFTS.

Acknowledgment is made of the gift by the class of 1907 of five valuable photogravures, — Alexander's "Evolution of a Book;" the Glee Club has presented the school with a pianola; and Rev. James L. Hill has tendered the use of a lot of land to be used as an additional school garden.

#### STATISTICS.

1. The whole number of students in attendance for the year ending July 1, 1907, was 176. Of these, 94 came from Essex County, 61 from Middlesex County, 12 from Suffolk County, 1 from Barnstable County. From the State of New Hampshire there were 4; from Maine, 1; from Vermont, 1; and from Turkey, 2. Since the school was established in 1854 there have been 5,441 students enrolled, of whom 2,932 have been graduated from regular courses, and 48 have received certificates for work done as special students. For the full period of fifty-three years, 54.7 per cent. of those who entered have received diplomas or certificates, and 84.3 per cent. of those entering during the past three years have successfully completed their courses.

2. The number of new students admitted to the school during the year was 82, of whom 7 were special students. Among them there were 12 who had had experience in teaching. Of the new students, 8 came from Lynn; 7 from Cambridge; 7 from Everett; 5 each from Salem and Amesbury; 4 from Somerville; 4 from Malden; 3 each from Andover and Reading; 2 each from Beverly, Chelsea, Gloucester, Newburyport, Rowley, Revere, Manchester, Groveland; 1 each from Wakefield, Danvers, Lynnfield, Peabody, Lanesville, Boston, Melrose, Boxford, Marblehead, Barnstable, Wenham, Nahant, Essex. There were also 4 from New Hampshire, 1 from Maine, 1 from Vermont and 1 from Turkey. The average age of the members of the junior class at the opening of the school year was 18.9 years.

3. The occupations of the fathers of the new students were as follows: merchants and salesmen, 19; mechanics, 16; farmers, 7; clerks, 6; foremen and superintendents, 5; painters, laborers, 4 each; contractors, carpenters, 3 each; physicians, railroad employees, janitors, 2 each; clergyman, author, lawyer, lighthouse keeper, sea captain, teacher, 1 each; unknown, 3.

4. The number of graduates June 25, 1907, was 77, and 4 candidates received certificates for the completion of a year's special work. The whole number of graduates of the school has been 2,932, and the number of certificates granted for a year's work has been 48.

ELLA LYMAN CABOT,  
J. D. MILLER,

*Board of Visitors.*

## STATE NORMAL SCHOOL, WESTFIELD.

CLARENCE A. BRODEUR, PRINCIPAL.

### INSTRUCTORS IN THE NORMAL SCHOOL.

CLARENCE A. BRODEUR, . . . . .	Pedagogy, school law, school management.
LEWIS B. ALLYN, . . . . .	Mathematics, chemistry, physics.
EDITH L. CUMMINGS, . . . . .	Gymnastics, manual training.
FREDERIC GOODWIN, . . . . .	Vocal music.
MRS. ADELINE A. KNIGHT, . . . . .	English, literature, history.
WILL S. MONROE, . . . . .	Psychology, history of education, geography.
LOUIS G. MONTE, . . . . .	Drawing.
CHARLES B. WILSON, . . . . .	Natural science.

### TRAINING SCHOOL.

GEORGE W. WINSLOW, . . . . .	Principal.
A. ANNETTE FOX, . . . . .	Eighth grade.
ALICE M. WINSLOW, . . . . .	Eighth grade.
ANNA M. DOWNEY, . . . . .	Seventh grade.
METTA D. BRADSTREET, . . . . .	Seventh grade.
LUCIA A. COLEMAN, . . . . .	Sixth grade.
ELLA J. DOWNEY, . . . . .	Sixth grade.
MARY G. SHEA, . . . . .	Fifth grade.
EDITH M. ROBBINS, . . . . .	Fifth grade.
ELIZA CONVERSE, . . . . .	Fourth grade.
LURA C. WORTHEN, . . . . .	Mixed grade.
FRANCES L. FOSTER, . . . . .	Third grade.
FLORENCE P. AXTELLE, . . . . .	Second grade.
EUNICE M. BEEBE, . . . . .	First grade.
EMMA L. HAMMOND, . . . . .	Kindergarten.

The great event of the year at this school has been the triennial meeting of the Alumni Association of the Westfield Normal School. Since 1847 triennial gatherings have been held with but a single omission (1872). On June 1 nearly a thousand graduates, pupils and friends met to renew the associations of former days. An interesting program was furnished under the direction of the president, Hon. Geo. Bruce Cortelyou, Secretary of the Treasury. The new presiding officer is Mr. Marcus White, principal of the normal school at New Britain, Conn.

An organization helpful in fostering a spirit of loyalty is the Westfield Normal Alumni Association of Eastern Massachusetts, which was organized May 6, 1905. About sixty persons

formerly identified with the school gather annually in Boston, and after a social hour have dinner and enjoy addresses.

The enrolment of the school is now about 150 students, 70 of whom live at Dickinson Hall. An especial effort is being made this year to improve the social life of those who stay at the dormitory.

In May last Mr. George T. Sperry, for four years teacher of drawing, resigned to accept a position in the Brooklyn Polytechnic Institute. Mr. Sperry's service was unique and exceptionally valuable, and it was no easy matter to find a suitable successor. Mr. Louis G. Monté, teacher in the Brooklyn High School of Commerce, was placed in charge of the department, and has entered upon his new duties of the position. He is able, enthusiastic and painstaking.

The Westfield Normal School seeks to be an excellent normal school, and in addition to touch the life of the people of the Connecticut valley as helpfully as possible. The instructors not only attend to the duties of the class room, but in addition are frequent speakers at educational, literary and social gatherings. During the past year Messrs. Allyn, Brodeur, Monroe and Wilson have made two hundred and sixty addresses of this nature, while the services of Mr. Goodwin are in constant demand. Such a school should not only prepare students for the teacher's profession, but it should also do effective work in the general education of the people of the State.

The following lectures have been given:—

- Miss Mabel C. Bragg of Lowell, — The Art of Story Telling.  
Mr. Grenville T. Fletcher, formerly agent of the State Board of Education, — The Modern Rural School.  
Mr. Charles S. Copeland, Harvard University, — Readings from the Bible.  
Rev. M. J. Fenenga, Ashland, Wis., — Education under Difficulties.  
Dr. E. R. Johnstone, New Jersey Training School for Feeble-minded Children, Vineland, — The Training of Backward Children.  
Mr. Clarence A. Brodeur, — An Evening with Longfellow.  
Mr. Edwin D. Mead, Boston, — The Inheritance and Responsibility of the New England Scholar.  
Rev. Charles Allen Dinsmore, Waterbury, Conn., — The Spiritual Interpretation of the Divine Comedy.  
Prof. Edward Howard Griggs, — The Problem of the Divine Comedy.

The interior of some of the buildings calls for immediate attention for the good of the property as well as for benefit of the students, and an appropriation is asked for to meet this necessity. Economy requires it.

### STATISTICS.

1. Number of pupils admitted to the Westfield Normal School since its organization, 4,900. Number graduated since 1855, 2,027. Number graduated in June, 1907, 72 women. Present number of pupils, 147. Number examined for admission in 1907, 72. Number rejected or who did not enter, 8. Number entering in September, 1907, 80.

2. Average age of pupils admitted in 1907, 18 years, 5 months, 6 days.

3. Residences, by towns, of those who entered in September, 1907: Belchertown, 2; Bellows Falls, Vt., 1; Chicopee, 2; Easthampton, 2; Franklin, 1; Glendale, 2; Granby, 1; Hadley, 3; Hartford, Conn., 1; Holyoke, 12; Huntington, 1; Indian Orchard, 1; Montague, 1; Norfolk, Conn., 1; Northampton, 1; Northbridge, 1; Palmer, 1; Pittsfield, 3; Revere, 1; Shelburne Falls, 1; Springfield, 16; Sunderland, 1; Ware, 2; Westfield, 19; Whately, 1; Whitinsville, 1; Windsor, Vt., 1.

4. Residences, by counties, of those who entered in September, 1907: Berkshire, 5; Franklin, 4; Hampden, 51; Hampshire, 12; Norfolk, 1; Suffolk, 1; Worcester, 2.

5. Occupations of parents: city officials, 2; clerks and salesmen, 6; farmers, 9; laborers, 22; machinist, engineer, painter, plumber, carpenter, printer and curator of museum, 1 each; clergymen and manufacturers, 2 each; insurance agents, 3; merchants, 8.

ALBERT E. WINSHIP,  
CLINTON L. RICHMOND,  
*Board of Visitors.*

## STATE NORMAL SCHOOL, WORCESTER.

E. HARLOW RUSSELL, PRINCIPAL.

## INSTRUCTORS.

E. HARLOW RUSSELL, . . . . .	Theory and art of teaching, reading, psychology of childhood.
REBECCA JONES, . . . . .	Elementary methods, supervision of apprentices, sewing.
HELEN F. MARSH, . . . . .	Music, drawing.
ARABELLA H. TUCKER (clerk), . . . . .	History of education, botany, penmanship.
OLIVE RUSSELL, . . . . .	Assistant kindergartner.
ANNA P. SMITH (librarian), . . . . .	Mathematics, supervision of apprentices.
AMY L. BOYDEN, . . . . .	Teacher of primary class, elementary methods, window gardening.
HENRIETTA A. MURRAY, . . . . .	Gymnastics, school games.
FRANK DREW, . . . . .	School hygiene, psychology, principles of teaching.
HORACE G. BROWN, . . . . .	Literature, English grammar, history.
EDWARD L. SUMNER, . . . . .	Choral singing.
ROBERT S. BALDWIN, . . . . .	English, civil government.
LEE RUSSELL, . . . . .	Chemistry, mineralogy, supervision of apprentices.
ROBERT M. BROWN, . . . . .	Mathematics, physics, geography.
HELEN L. BROWN, . . . . .	Head kindergartner.
MARY A. CHARTERIS, M.D., . . . . .	Physical examiner.

At the request of the Board of Visitors, Mr. E. H. Russell, principal of the Worcester school, has prepared the following statement, which is hereby submitted as the report of the visitors:—

The teaching staff and the student body remain substantially unchanged. An unusually large class, one of the largest in its history, was graduated in June, and has already (November) been absorbed, with hardly an exception, into the teaching force of the Commonwealth, with a greater demand than we can supply still pressing upon us. The entering (junior) class numbers almost exactly the same as that of a year ago, although a few who were admitted have for various good reasons failed to enter school at this time as students.

This school continues to lay emphasis upon the practical side of its work. Especially since the standard of admission in this State has been raised to include a full high school course, it has been felt that somewhat less attention need be given to

scholarly acquirements, and that more time could well be bestowed upon the art of teaching. The results of this enlargement of our course on the practical side have seemed fully to justify the step. We can now recommend our graduates for positions of responsibility with far greater confidence than could be done say twenty years ago. The year of practice under supervision, which a large majority of our students elect, is a much better preparation for skillful teaching and effective management than is the first year of such independent experience as normal graduates with little or no practice are likely to get in schools of their own; and this has been so far recognized by superintendents that in some cases our graduates have had their year of approved "apprenticeship" counted as a year of successful experience, with corresponding advance of salary to begin with.

Increased attention has been given during the past year to the medical examination of students and to sanitary and hygienic conditions generally. The health and physical vigor of the school is satisfactory, and was never better.

We are endeavoring, amid the confusion or uncertainty which more or less prevails in educational circles and in the community at large, to work out tentatively a satisfactory correlation between drawing and manual training, upon which we hope to make a detailed report next year.

In the perplexing matter of "nature study" we are experimenting with much interest and some success in window gardening, specifically, in the effort to domesticate, as it were, the wild plants of our pastures, meadows and brooksides, by transplanting them to flower pots and window boxes, thereby accustoming the hardy species to in-door conditions. It is hoped that by thus in a manner making "pets" of such wild growths as will bear domestication, our students and their future pupils may be led to feel a deeper and more vital interest in the plant neighbors among which they will pass most of their lives.

As was mentioned in our last report, more and more money will be needed each year for repairs. It would be a great advantage to have our gymnasium enlarged. Its floor space was considered ample when it was built, but the gymnastic exercises most approved and in vogue at present demand more room.

The cost of simply extending the building, say thirty or thirty-five feet, to the eastward would not be heavy, while the relief experienced would be considerable and would be permanent.

Grateful appreciation should be expressed of the admirable anniversary address given to the school and its friends on graduation day by Rev. Dr. Edward H. Hall of Cambridge, a warm friend of the school from its first establishment.

The usual statistics for the year 1906-07 are hereto subjoined.

#### STATISTICS.

1. Number of different students for the year 1906-07, 133.
2. Number admitted in September, 1907, 52. Number admitted since the beginning of the school in 1874, 2,033.
3. Average age of students last admitted, 18 years, 10 months.
4. Residences of students last admitted: Worcester County, 51; New Hampshire, 1; total, 52.
5. Occupations of students' parents: unknown, 9; mechanics, 7; merchants, 7; farmers, 5; bookkeepers, 4; firemen, 3; salesmen, 2; sewer in mill, 2; stone cutters, 2; policemen, 2; weavers, 2; laborer, decorator, teacher, real estate agent, engineer, janitor, foreman, 1 each; total, 52.
6. Number in the graduating class, June, 1907, 48. Number of graduates since 1876, 1,219.
7. Average age of the graduating class, June, 1907, 21 years, 3 months.
8. Library: reference books reported last year, 7,380; volumes added the present year, 294; total, 7,674. Text-books reported last year, 8,215; volumes added the present year, 177; total, 8,392. Whole number of volumes in the library, 16,066.

GEORGE I. ALDRICH,  
ELLA LYMAN CABOT,  
*Board of Visitors.*



# STATE NORMAL ART SCHOOL, BOSTON.

GEORGE H. BARTLETT, PRINCIPAL.

## INSTRUCTORS.

GEORGE H. BARTLETT, . . . . .	Lecturer on historic ornament, history and technical development of the illustrating arts, blackboard illustration.
ALBERT H. MUNSELL, . . . . .	Drawing and painting from the antique figure and living model, composition, artistic anatomy.
EDWARD W. D. HAMILTON, . . . . .	} Drawing and painting from the antique figure and living model, composition.
ERNEST L. MAJOR, . . . . .	
JOSEPH R. DeCAMP, . . . . .	Painting from the living model, portraiture.
ANSON K. CROSS, . . . . .	} Freehand drawing, light and shade, perspective, model drawing theory.
RICHARD ANDREW, . . . . .	
ETHEL G. BARTLETT, . . . . .	Freehand drawing, light and shade.
MERCY A. BAILEY, . . . . .	Water-color painting.
VESPER L. GEORGE, . . . . .	Design.
LAURIN H. MARTIN, . . . . .	Applied design, laboratory work.
GEORGE JEPSON, . . . . .	Descriptive geometry, mechanical drawing and laboratory work.
CYRUS E. DALLIN, . . . . .	Modeling from antique and life, composition.
ANNIE E. BLAKE, . . . . .	Modeling and casting, design in the round.
RALPH E. SAWYER, . . . . .	} Building construction, architectural drawing and design.
ALBERT S. KENDALL, . . . . .	
JOSEPH H. HAWES, . . . . .	Sloyd and mechanic arts.
MARY G. BATCHELOR, . . . . .	Teaching exercises, graded illustrative work, drawing in relation to other studies.
JOHN L. FRISBIE, . . . . .	Ship draughting.
ANNA M. HATHAWAY, . . . . .	Curator.
OLIVE E. PLAISTED, . . . . .	Assistant curator.

## WHAT TO DO.

The Normal Art School finds itself confronted with grave issues. Even with the heightening of the standard for admission, the number of applicants far exceeds the amount of floor room available for each pupil. Either the scholars must be definitely limited, numerically, to correspond with the requirements of space allotted to each student by the best experts in hygiene and ventilation, or a new site for the school must be obtained.

Either alternative has its natural, foregone objections. Undoubtedly the most far-reaching conclusion would be in favor of the erection of a new building, sufficiently large to include

the ever-increasing demands for an industrial art education. But such a result can come only through action of the Legislature, which is constantly harassed by the many claims made upon it for its financial support; and the project brought before its members last winter, for the purchase of a house adjoining the normal school, did not meet with approval. Objections to the plan were wise from the point of view of the Legislature, which is obliged to take into account all other expenditures; but from the single point of view of the school it was a matter of keen regret that its enlargement was judged impracticable. Therefore, the principal has been obliged not only to limit the number of those doing post-graduate work, but also to refuse admission to nearly fifty young men and women who desired to enter the regular three years' course of the school.

Is it then, wise to appeal a year hence to the Legislature for another building, or, on the other hand, to permanently limit the number of pupils attendant at any one time on the school, and also to curtail the more advanced instruction that is absolutely needed for the present equipment of teachers of industrial art and drawing?

#### AFTERNOON SESSIONS.

The original intent of the school, to train teachers of industrial drawing for such public schools of the State wherein drawing was made obligatory, is as strictly maintained to-day as it was thirty-four years ago. But the scope of drawing has broadened from kindergarten methods to arts and crafts, to applied mechanics, to decorative, constructive and technical arts, and to design. And the Normal Art School has pressed steadily forward on these lines, yet barely keeping pace with widening public needs. Consequently, the principal and the Board of Visitors have applied for permission to extend the hours of instruction twice a week till 4 o'clock, instead of closing the school at 2 o'clock in the afternoon. If the requisite means for this enlargement is provided by the Legislature, there will be given further advanced instruction in applied mechanics, constructive arts, laboratory work, metal work and arts and crafts in general.

## ADVANCED TECHNICAL INSTRUCTION.

Through the gifts and loans of the principal of the school, the two attics of the building have been equipped with his own tables, tools and appliances, in order that the various branches of the art of lithography may now be taught by Mr. Bartlett himself to such pupils as desire and are judged competent to become able to teach the art or to practise it professionally. Instruction will also be given by him in line drawing for reproduction from the zinc plate. Such teaching stands in direct relation to industrial art as it is now taught in the public schools, and to that which doubtless will be taught in the future through the far-reaching influences of the new Industrial Commission.

The demand for practical instruction in technical arts is increasingly insistent, and trained experts are required. Therefore, must the instruction be given along normal lines, so that our pupils may be able to take up the work professionally or practically. The larger the number of industrial or trade schools, the greater is the need for such teaching of the allied reproducing arts as have a direct bearing on industrial arts, higher technical education and art culture and commerce.

## PUBLIC SCHOOL CLASS.

Another important step in raising the standard of pedagogic and artistic ability for those who are to be teachers of drawing in the schools of the State is the entrance examination to the public school class, after three years of study in the other courses of the school, from which heretofore they have passed into the final course without examination. Such entrance examinations, however, will tend to eliminate personal unfitness, and to develop a nobler conception of the profession of teaching than from the standpoint of self-support alone.

An arrangement has also been effected by which the class this year during its first term will have the advantage of being instructed once a week by Mr. Frederic L. Burnham. As State agent for the promotion of manual arts, he is especially qualified to show how the art of drawing should be adapted to the various grades in public schools, the personal knowledge

of the pupils, which he obtains through his instruction of them, enabling him better to adjust his work throughout the State (as far as subject matter and methods of teaching are concerned) to the actual working conditions of teachers. His instruction is marked by clearness, conciseness and simplicity.

#### LUNCH ROOM AND SOCIAL LIFE.

The lunch room, under the skillful management of Mr. and Mrs. Brigdale, has become very attractive so far as its excellent menu is concerned, though the primitive character of the tables and seats and of the culinary apparatus and dishes is very far from being artistic, desirable or even convenient.

The social life of the school is promoted through the organizations of class officers and receptions, and the comradeship which is also fostered by the school paper and its competitions for covers and illustrations. However important to all pupils is the practice of the usage of long-established social conventions, tending to dignity, ease and right self-expression, there are none who should unconsciously more manifest by their personality the possession of such qualities than the graduates of an art school.

The various subjects taught and courses followed in the school create of their own weight that atmosphere which makes teachers broad, seeing existing relationships and furthering conditions which will bring the influences of art to bear directly and beneficently on all departments of life.

#### GIFTS.

From the graduating class of 1907 were received two portraits by Ingres, "Portrait de L' Artiste" and a "Portrait de Madame de Senores."

#### STATISTICS.

The statistics for the school from Sept. 28, 1906, to June 20, 1907, are as follows:—

1. Total number of students, 374, — males, 61; females, 313. Number in attendance at the present time (Dec. 5, 1907), 348.
2. Average age of entering class, 20.4 years.
3. Graduates in June, 1907: public school course, 27; course in draw-

ing and painting, 16; course in mechanical drawing, 3; course in modeling and design in the round, 3; course in decorative and applied design, 6; total, 55.

4. Number of students from the several counties of the State: Barnstable, 2; Berkshire, 5; Bristol, 7; Dukes, 1; Essex, 41; Franklin, 2; Hampden, 10; Hampshire, 2; Middlesex, 100; Norfolk, 24; Plymouth, 15; Suffolk, 130; Worcester, 21; total, 360. Students from other States are distributed as follows: Maine, 3; New Hampshire, 3; Vermont, 1; Connecticut, 1; New York, 1; Kansas, 1; Indiana, 1; Nova Scotia, 1; Canada, 2; total, 14. Total from other States and Massachusetts, 374.

5. Occupations of fathers of students: professions, 15; teachers, 3; real estate and insurance, 5; contractors and builders, 11; merchants and traders, 45; manufacturers, 10; commercial business, 16; farmers, 10; mechanics, 41; other callings, 119; total, 275. Retired, 27; deceased, 72; complete total, 374.

KATE GANNETT WELLS,  
THOMAS B. FITZPATRICK,  
CAROLINE HAZARD,

*Board of Visitors.*

## STATE NORMAL SCHOOLS.

Table showing admissions and attendance for 1907, with other normal school data.

NORMAL SCHOOLS.	TEACHERS IN NORMAL SCHOOLS.		TEACHERS IN MODEL AND PRACTICE SCHOOLS.		ADMITTED TO —		NUMBER OF DIFFERENT STUDENTS FOR 1906-1907.			ATTENDANCE DEC. 1, 1907.			Number of graduates in 1907.	Different students from the beginning.	Graduates from the beginning.
	Men.	Women.	Men.	Women.	Entering class.	Higher or special classes.	Men.	Women.	Totals.	Men.	Women.	Totals.			
Bridgewater, . . . . .	7	10	1	12	111	12	25	225	250	26	244	270	94	5,741	3,816
Fitchburg, . . . . .	4	7	3	17	64	22	-	144	144	-	171	171	46	736	377
Framingham, . . . . .	5	10	-	9	138	-	-	213	213	-	242	242	78	4,703	2,708
Hyannis, <sup>1</sup> . . . . .	3	4	1	5	24	3	7	45	52	6	37	43	26	385	197
Lowell, . . . . .	3	8	4	43	57	5	1	141	142	-	149	149	67	862	538
North Adams, . . . . .	4	4	-	21	47	4	-	96	96	-	81	81	31	615	314
Salem, . . . . .	6	9	1	10	97	4	7	169	176	2	161	163	77	5,534	2,932
Westfield, . . . . .	6	2	1	14	74	9	-	165	165	2	145	147	72	4,900	2,027
Worcester, . . . . .	7	6	-	3	52	-	4	132	136	3	109	112	48	2,033	1,219
Normal Art (Boston), . . . .	14	4	-	-	90	2	61	313	374	54	294	348	55	3,755	1,372
Totals, . . . . .	59	64	11	134	754	61	105	1,643	1,748	93	1,633	1,726	594	29,264	15,500

<sup>1</sup> In addition, summer session students, 210; graduates, 4.

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SEVENTY-FIRST ANNUAL REPORT

OF THE

SECRETARY OF THE BOARD.

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## SECRETARY'S REPORT.

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*To the Board of Education and the Legislature.*

I have the honor to submit the seventy-first annual report of the secretary upon the condition and needs of the public schools of the State. In accordance with the law, the usual returns have been made by school committees to the office of the Board, and the usual abstract prepared.

### SUMMARY OF STATISTICS FOR 1906-1907.

#### *I. Number of Public Day Schools.*

1. Number of towns, 321; cities, 33. Total, 354.

All have made the annual returns required by law.

2. Number of public schools based on the single class room as the unit of comparison, . . . . . 11,369  
Decrease from the preceding year, . . . . . 86

#### *II. Average Number of Months the Public Schools have been kept.*

1. Average number of months the public schools have been kept during the year, . . . . .  $9\frac{7}{10}$   
Average the same as last year.
2. Average number of months the high schools have been kept during the year, . . . . .  $9\frac{11}{10}$   
Decrease, . . . . .  $\frac{1}{10}$

#### *III. School Census Data.*

1. Number of persons in the State Sept. 1, 1906, between the ages of seven and fourteen years: males, 191,192; females, 190,513; total, . . . . . 381,705  
Increase in the total, . . . . . 7,393
2. Number of persons in the State Sept. 1, 1906, between the ages of five and fifteen years: males, 265,567; females, 265,510; total, . . . . . 531,077  
Increase in the total, . . . . . 8,764

3. Number of illiterate minors in the State Sept. 1, 1906, over fourteen years of age: males, 4,617; females, 3,301; total, . . . . .	7,918
Increase in the total, . . . . .	1,027

#### IV. *Public School Enrollment and Attendance Data.*<sup>1</sup>

1. Number of pupils between seven and fourteen years of age attending the public schools during the school year, . . . . .	329,096
Increase, . . . . .	4,728
2. Number of different pupils between five and fifteen years of age attending the public schools during the school year, . . . . .	458,728
Increase, . . . . .	8,470
3. Number of pupils under five years of age attending the public schools during the school year, . . . . .	11,906
Increase, . . . . .	601
4. Number of pupils over fifteen years of age attending the public schools during the school year, . . . . .	48,998
Increase, . . . . .	1,745
5. Total enrollment of pupils of all ages in the public schools during the school year, . . . . .	519,632
Increase, . . . . .	10,816
6. Average membership of pupils in all the public schools during the school year, . . . . .	460,336
Increase, . . . . .	8,736
7. Average attendance in all the public schools during the school year, . . . . .	425,188
Increase, . . . . .	9,680
8. Percentage of attendance based on the average member- ship, . . . . .	.92
9. Percentage of attendance based on the total enrollment, . . . . .	.82
10. Number graduated from grammar schools during the school year, . . . . .	21,912

#### V. *Public School Teachers and their Wages.*

1. Number of teachers required in the public schools during the year: men, 1,245; women, 13,204; total, . . . . .	14,449
Increase, . . . . .	284
2. Number of teachers in the public schools who have grad- uated from college: in high schools, 1,439; in the elementary schools, 483; total, . . . . .	1,922
Increase, . . . . .	6

<sup>1</sup> The enrollment and attendance data are for a school year ending practically in June, 1906.

3. Number of teachers who have graduated from normal schools, . . . . .	7,023
Increase, . . . . .	254
4. Average wages of male teachers per month in the public schools, . . . . .	\$153 02
Increase, . . . . .	\$4 00
5. Average wages of female teachers per month in the public schools, . . . . .	\$58 62
Increase, . . . . .	\$1 55

### VI. *Public High Schools.*

1. Number of public high schools, . . . . .	266
Increase, . . . . .	3
2. Number of teachers in the high schools, . . . . .	1,886
Decrease, . . . . .	12
3. Number of pupils in the high schools, . . . . .	49,937
Increase, . . . . .	2,405
4. Number of new pupils admitted to high schools at the beginning and during the school year, . . . . .	19,309
5. Number of graduates from high schools, . . . . .	7,600
6. Expenditures for high school support, . . . . .	\$2,704,813 03
Increase, . . . . .	\$149,232 60

### VII. *Public Evening Schools.*

1. Number of cities and towns having public evening schools, . . . . .	59
Increase, . . . . .	3
2. Number of evening schools, . . . . .	273
3. Number of teachers, . . . . .	1,843
Increase, . . . . .	30
4. Number of different pupils in attendance: males, 31,822; females, 17,899; total, . . . . .	49,721
Increase in total, . . . . .	2,381
5. Average attendance, . . . . .	26,094
Increase, . . . . .	553
6. Expended upon evening schools, . . . . .	\$315,255 07
Decrease, . . . . .	\$475 46

### VIII. *Public Kindergartens.*

1. Number of cities and towns having public kindergartens, . . . . .	38
Decrease, . . . . .	1
2. Number of public kindergartens, . . . . .	297
Increase, . . . . .	18
3. Number of teachers, . . . . .	512
Increase, . . . . .	16

4. Number of pupils, . . . . .	17,296
Increase, . . . . .	649
5. Cost of public kindergartens, . . . . .	\$333,938 32
Increase, . . . . .	\$43,340 08

### *IX. Cost of the Public Schools for Support.*

A. Total expenditure for the <i>support</i> of the public schools, \$14,052,899 40	
Increase, . . . . .	\$467,266 36
This expenditure is distributed among the following classes indicated in the statutory definition of support:—	
1. Teachers' wages, . . . . .	\$10,302,887 44
Increase, . . . . .	\$425,161 59
2. Conveyance of pupils, . . . . .	\$252,451 11
Increase, . . . . .	\$16,035 71
3. Fuel and care of school premises, . . . . .	\$1,828,263 03
Decrease, . . . . .	\$35,076 39
4. School committees, clerks, truant officers, etc., . . . . .	\$185,429 10
Increase, . . . . .	\$13,471 63
5. Superintendents of schools, . . . . .	\$350,505 32
Increase, . . . . .	\$934 49
6. Text-books and supplies, . . . . .	\$755,749 49
Increase, . . . . .	\$49,438 93
7. School sundries, . . . . .	\$377,613 91
Decrease, . . . . .	\$2,708 60
B. Amount included in the total expenditure for <i>support</i> as given under IX., A, but derived from other sources than local taxation or its equivalent, such as aid from the State, income from local funds, voluntary contributions, etc., . . . . .	\$600,087 21
Increase, . . . . .	\$14,852 06
C. Amount raised by <i>local taxation</i> and expended for the <i>support</i> of public schools, being the total expenditure for such support as given under IX., A, diminished by contributions for such support from other sources than local taxation as given under IX., B, . . . . .	\$13,452,812 19
Increase, . . . . .	\$452,414 30

### *X. Cost of the Public Schools for Buildings.*

A. Total expenditure for <i>buildings</i> for the public schools, \$3,704,772 56	
Decrease, . . . . .	\$48,838 33
This expenditure is distributed as follows:—	
1. New schoolhouses, . . . . .	\$2,499,485 95
Decrease, . . . . .	\$154,668 12

2. Alterations and permanent im-		
provements, . . . . .	\$773,825	69
Increase, . . . . .	\$82,942	32
3. Ordinary repairs, . . . . .	\$431,460	92
Increase, . . . . .	\$22,887	45
<i>B. Amount included in the total expenditure for buildings</i>		
<i>for the public schools as given under X., A, but de-</i>		
<i>derived from other sources than local taxation or its</i>		
<i>equivalent, . . . . .</i>	\$311,094	93
Increase, . . . . .	\$299,104	23
<i>C. Amount raised by local taxation and expended for build-</i>		
<i>ings, being the total expenditure for buildings as given</i>		
<i>under X., A, diminished by contributions for build-</i>		
<i>ings from other sources than local taxation as given</i>		
<i>under X., B, . . . . .</i>	\$3,393,677	63
Decrease, . . . . .	\$347,942	56

### *XI. Total Cost of the Public Schools for Support and Buildings.*

1. Total expenditure for <i>support</i> and <i>buildings</i> , for the pub-		
lic schools, that is, for all public school purposes, . . . . .	\$17,757,671	96
Increase, . . . . .	\$418,428	03
2. Amount included in the total expenditure for <i>support</i>		
and <i>buildings</i> as given under IX., A, and X., A, but		
derived from other sources than local taxation or its		
equivalent, . . . . .	\$911,182	14
Increase, . . . . .	\$313,956	29
3. Amount raised by <i>local taxation</i> and expended for <i>sup-</i>		
port and <i>buildings</i> , being the total expenditure for		
these purposes as given under IX., A, and X., A,		
diminished by contributions thereto from other		
sources than local taxation or its equivalent, as given		
under IX., B, and X., B, . . . . .	\$16,846,489	82
Increase, . . . . .	\$104,471	74

### *XII. Cost of the Public Schools per Child.*

1. Average <i>taxation</i> cost of the public schools for <i>support</i>		
(IX., C) for each child in the state between the ages		
of five and fifteen years (III., 2), . . . . .	\$25	33
Increase, . . . . .	\$0	44
2. Average <i>taxation</i> cost of the public schools for <i>support</i>		
(IX., C) for each child in the average membership of		
the public schools (IV., 6), . . . . .	\$29	22
Increase, . . . . .	\$0	43

3. Average <i>taxation</i> cost of the public schools for <i>support</i> and <i>buildings</i> , that is, for all school purposes (XI., 3), for each child in the state between the ages of five and fifteen years (III., 2), . . . . .	\$31 72
Decrease, . . . . .	\$0 33
4. Average <i>taxation</i> cost of the public schools for <i>support</i> and <i>buildings</i> , that is, for all school purposes (XI., 3), for each child in the average membership of the public schools (IV., 6), . . . . .	\$36 60
Decrease, . . . . .	\$0 47
5. Average expenditure on account of the public schools for <i>support</i> and <i>buildings</i> , including <i>voluntary contributions</i> as well as money raised by <i>taxation</i> (XI., 1), for each child in the State between five and fifteen years of age (III., 2), . . . . .	\$33 44
Increase, . . . . .	\$0 24
6. Average expenditure on account of public schools for <i>support</i> and <i>buildings</i> , including <i>voluntary contributions</i> as well as money raised by <i>taxation</i> (XI., 1), for each child in the average membership of the public schools (IV., 6), . . . . .	\$38 58
Increase, . . . . .	\$0 18

### XIII. Percentage of State Valuation expended for Public School Purposes.

1. Percentage of the total State valuation (May 1, 1906) raised by <i>local taxation</i> and expended for the <i>support</i> of the public schools (IX., C), . . . . .	.003 $\frac{95}{100}$ or \$3 95 per \$1,000
Increase, . . . . .	.000 $\frac{6}{100}$ or \$0 06 per \$1,000
2. Percentage of the total State valuation (May 1, 1906) raised by <i>local taxation</i> and expended on the public schools for <i>support</i> and <i>buildings</i> (XI., 3), . . . . .	.005 $\frac{98}{100}$ or \$4 98 per \$1,000
Decrease, . . . . .	.000 $\frac{10}{100}$ or \$0 10 per \$1,000

### XIV. Vacation Schools, 1906.

1. Number of vacation schools supported at public expense,	38
2. Number of cities and towns having vacation schools, .	14
3. Number of teachers, . . . . .	279
4. Number of pupils, . . . . .	19,034
5. Average number of months schools were kept, . . .	1 $\frac{4}{5}$
6. Cost of vacation schools, . . . . .	\$14,655 69

XV. *Academies and Private Schools.*

1. Number of incorporated academies, . . . . .	41
Decrease, . . . . .	1
2. Whole number of pupils in the academies for the year, .	5,750
Increase, . . . . .	592
3. Amount of tuition paid in the academies during the year, \$620,433	41
Increase, . . . . .	\$43,392 98
4. Number of private schools returned, . . . . .	314
Decrease, . . . . .	11
5. Whole number of pupils in the private schools during the year, . . . . .	91,457
Increase, . . . . .	94
6. Amount of tuition paid in private schools (much of it estimated), . . . . .	\$830,052 38
Decrease, . . . . .	\$41,432 44

## HIGH SCHOOL ATTENDANCE.

The most interesting fact revealed in the annual returns for the year 1906-07 is the steady increase in high school attendance. The gain in enrollment in all the public schools in ten years is 18.4 per cent.; in average membership, 26.5 per cent.; in high school membership, 37.8 per cent., — more than double the rate of gain in total enrollment.

For the first time facts have been gathered tending to show what proportion of children leaving the grammar schools continue their school attendance.

The number graduating from the grammar schools of the State in 1906 was 21,912; the number admitted to the high schools during the same year was 19,309; the second number is 88 per cent. of the first.

If the small number entering from other high schools and the number entering from private schools were deducted, the figures would still be most significant. They show that of the children who remain in the grammar schools to the completion of the course more than 80 per cent. go on into the high school. In many communities all go on.

It is too early to ask how many of them will complete the high school course, but in the school year of 1906, 7,600 graduated from the high schools. This is about 40 per cent. of the number admitted during the same year, and a larger proportion of those admitted four years before. These figures are

much in excess of the usual guesses regarding high school attendance.

It would be interesting to know how many of those who enter the public schools in any one year continue to the end of the grammar and of the high school course, but such data are impossible to obtain except in a small system of schools where the population is stationary. In any large system the transfers and discharges are so numerous as to make it impossible to trace through the course a stream which is steadily lessening and tending to lose itself in the surrounding mass.

The ratio of the high school enrollment to the total school enrollment has increased in the last ten years from 8.2 per cent. to 9.6 per cent. This ratio naturally varies greatly in different towns and cities. The following table shows the ratio in the cities of the State:—

CITIES.	Per Cent.	CITIES.	Per Cent.
Beverly, . . . . .	15.9	Holyoke, . . . . .	9.5
Melrose, . . . . .	14.9	Gloucester, . . . . .	9.0
Newburyport, . . . . .	14.6	Springfield, . . . . .	9.0
Newton, . . . . .	13.6	North Adams, . . . . .	8.5
Fitchburg, . . . . .	13.5	Brockton, . . . . .	8.2
Marlborough, . . . . .	13.1	Taunton, . . . . .	8.1
Waltham, . . . . .	13.0	Boston, . . . . .	8.0
Northampton, . . . . .	11.7	Lowell, . . . . .	8.0
Medford, . . . . .	11.6	Pittsfield, . . . . .	7.9
Quincy, . . . . .	11.6	Everett, . . . . .	7.6
Somerville, . . . . .	11.4	Lynn, . . . . .	7.6
Salem, . . . . .	10.8	Lawrence, . . . . .	7.1
Cambridge, . . . . .	10.3	Chelsea, . . . . .	6.2
Malden, . . . . .	10.3	Chicopee, . . . . .	4.7
Worcester, . . . . .	9.8	Fall River, . . . . .	4.6
Woburn, . . . . .	9.6	New Bedford, . . . . .	4.0
Haverhill, . . . . .	9.5		

Some of the towns rank very high in their ratio of high school attendance, Hingham reaching 21.6 per cent. and Reading 26.1 per cent.



## SCHOOL HYGIENE.

The law of 1906, known as the medical inspection law (chapter 502, Acts of 1906), has brought the subject of school hygiene to the attention of the people of the State in such a general way as to justify devoting a large part of this report to a discussion of it.

The law itself has been received with those mingled emotions which all new legislation for social reform excites, shading off from enthusiasm through interest and curiosity to indifference, incredulity, ridicule and opposition.

While mandatory in its provisions, requiring school committees or boards of health to appoint school physicians, and requiring examinations to be made at least annually of all school children, the last section of the law makes it possible for any city council or town meeting to nullify the law by refusing an adequate appropriation for its execution.

The first section of the law also invites controversy between boards of health and school committees in the cities. In towns the board of health has no authority under the law to carry on school inspection, although in a few towns, evidently through misapprehension, this has been done.

In accordance with the law, school physicians have been appointed and appropriations for their work made in the following cities:—

*By Board of Health.*

Boston,	Lynn,	Quincy,
Cambridge,	Melrose,	Somerville,
Everett,	New Bedford,	Springfield,
Gloucester,	Newburyport,	Taunton,
Haverhill,	Newton,	Waltham,
Holyoke,	North Adams,	Worcester.
Lawrence, <sup>1</sup>	Pittsfield,	

*By School Committee.*

Brockton,	Malden, <sup>2</sup>	Northampton,
Chelsea,	Marlborough,	Salem,
Fitchburg,	Medford,	Woburn.

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<sup>1</sup> Also one other physician appointed by school committee without appropriation.

<sup>2</sup> Originally by board of health.

No appropriation has been made in Beverly, Chicopee, Fall River and Lowell.

In Beverly, where inspection had been carried on for several years by the school committee without special appropriation, the work has been stopped by the failure of the city council to appropriate. The new law has, therefore, proved a detriment in this city.

In Chicopee physicians have been appointed by the board of health, but an appropriation has been refused by the board of aldermen.

In Fall River, without an appropriation, the board of health has appointed physicians and made some examinations as an emergency measure under the general powers of the board.

In Lawrence the school committee appointed a school physician, expecting to secure an appropriation. Later the board of health secured an appropriation and appointed physicians. The schools have been under this double inspection, and the situation is not a creditable one.

Lowell has no appropriation and no inspection, although Lowell, through its superintendent, Mr. A. K. Whitcomb, was earliest in the field in vision and hearing tests, and to Mr. Whitcomb's pioneer work the passage of the law of 1906 was largely due.

In Waltham the two boards work in friendly co-operation, the physicians being appointed by the board of health and approved by the school committee.

The work in the cities varies greatly in amount, in quality and in compensation. This is shown by the following table, giving the number of children in the schools, the number of physicians, and the compensation of each: —

CITY.	Public school membership.	Number of school physicians serving.	Compensation.	Remarks.
Beverly, . .	2,599	1	—	No appropriation.
Boston, . .	84,870	80	\$200	— —
Brockton, . .	7,276	7	200	— —
Cambridge, . .	13,855	6	200	Five physicians appointed for private schools; each paid \$100.
Chelsea, . .	5,932	3	200	— —

CITY.	Public school membership.	Number of school physicians serving.	Compensation.	Remarks.
Chicopee, . .	2,299	5	\$250	No appropriation.
Everett, . .	5,885	5	75	-
Fall River, . .	12,641	8	30	Five physicians for parochial schools; no appropriation.
Fitchburg, . .	3,798	2	Not fixed.	\$500 appropriated.
Gloucester, . .	4,533	3	200	-
Haverhill, . .	5,201	2	200	-
Holyoke, . .	5,655	6	150	Not enough.
Lawrence, . .	7,530	6	-	-
Lowell, . .	9,991	-	-	No appropriation.
Lynn, . .	9,132	10	200	-
Malden, . .	5,952	3	50	-
Marlborough, . .	2,102	1	200	-
Medford, . .	3,629	1	200	-
Melrose, . .	2,793	3	75	-
New Bedford, . .	8,786	6	400	-
Newburyport, . .	1,831	1	225	-
Newton, . .	5,519	6	200	-
North Adams, . .	2,798	5	200	-
Northampton, . .	2,673	1	250	-
Pittsfield, . .	3,760	3	-	-
Quincy, . .	5,752	5	100	-
Salem, . .	4,305	1	250	-
Somerville, . .	11,070	7	200	One for parochial schools; paid \$100.
Springfield, . .	10,606	11	250	-
Taunton, . .	4,339	1	800	-
Waltham, . .	2,824	3	200	-
Woburn, . .	2,572	1	200	-
Worcester, . .	49,178	15	200	-

It is impossible to make any general statement as to service required of the school physicians. Several of the reports say, "such as the law requires;" in some cities weekly visits are required, with emergency calls; in some there are daily visits; in many no definite rules have been formulated. During this first year the plans are tentative, and a well-organized system has not yet been worked out.

## THE TOWNS.

The 321 towns may be grouped in five classes, for the purpose of this report: —

*Class I.* — Towns where an appropriation has been made, physicians appointed, and records of inspection made and furnished for this report: —

Acton,	Harwich,	Norton,
Agawam,	Hawley,	Pembroke,
Amherst,	Hingham,	Pepperell,
Arlington,	Holden,	Petersham,
Ashby,	Hopkinton,	Plympton,
Ashland,	Hudson,	Princeton,
Attleborough,	Hull,	Raynham,
Ayer,	Ipswich,	Rockport,
Barre,	Kingston,	Russell,
Bedford,	Leicester,	Shutesbury,
Belmont,	Leominster,	Southbridge,
Berkley,	Leverett,	Sunderland,
Carlisle,	Lexington,	Sutton,
Charlemont,	Leyden,	Swampscott,
Chelmsford,	Lincoln,	Templeton,
Chesterfield,	Littleton,	Tewksbury,
Cohasset,	Lunenburg,	Townsend,
Colrain,	Ludlow,	Tyngsborough,
Concord,	Lynnfield,	Walpole,
Dedham,	Mansfield,	Wareham,
Deerfield,	Marion,	Warren,
Dennis,	Maynard,	Warwick,
Dighton,	Medway,	Webster,
Douglas,	Millis,	Wendell,
Dudley,	Milton,	Westborough,
East Longmeadow,	Monroe,	West Boylston,
Easton,	Monson,	West Bridgewater,
Erving,	Montgomery,	West Brookfield,
Fairhaven,	Nahant,	Westminster,
Falmouth,	New Ashford,	Westwood,
Foxborough,	Norfolk,	Whitman,
Gill,	North Brookfield,	Williamsburg,
Groveland,	Northfield,	Winchendon,
Hadley,	North Reading,	Winthrop. — 103
Hardwick,		

*Class II.*—Towns where appropriations have been made and physicians appointed, but no records yet ready:—

Adams,	Heath,	Palmer,
Amesbury,	Hinsdale,	Pelham,
Ashfield,	Holbrook,	Phillipston,
Athol,	Holliston,	Plainfield,
Auburn,	Hopedale,	Prescott,
Becket,	Huntington,	Rowe,
Berlin,	Hyde Park,	Royalston,
Billerica,	Lancaster,	Rutland,
Blandford,	Lenox,	Sandisfield,
Boylston,	Longmeadow,	Savoy,
Bridgewater,	Marblehead,	Sheffield,
Brimfield,	Marshfield,	Sherborn,
Brookline,	Methuen,	South Hadley,
Canton,	Middlefield,	Sterling,
Charlton,	Middleton,	Stockbridge,
Chester,	Milford,	Stoneham,
Cummington,	Montague,	Upton,
Danvers,	Needham,	Ware,
Dunstable,	New Braintree,	Washington,
Egremont,	New Marlborough,	Wenham,
Enfield,	No. Attleborough,	Westford,
Essex,	Northbridge,	Westport,
Freetown,	Norwell,	West Springfield,
Goshen,	Oak Bluffs,	Weymouth,
Grafton,	Oakham,	Whately,
Hamilton,	Orange,	Wilbraham,
Hampden,	Orleans,	Winchester. — 83
Hanson,	Oxford,	

*Class III.*—Towns where physicians have been appointed, but no appropriations made:—

Andover,	Florida,	Harvard,
Belchertown,	East Bridgewater,	Hatfield,
Bellingham,	Easthampton,	Holland,
Bolton,	Framingham,	Hubbardston,
Boxford,	Franklin,	Lee,
Braintree,	Granville,	Manchester,
Brewster,	Great Barrington,	Mashpee,
Brookfield,	Greenwich,	Medfield,
Cheshire,	Groton,	Mendon,
Clarksburg,	Halifax,	Monterey,
Dana,	Hanover,	Natick,

Newbury,	Shelburne,	Wakefield,
New Salem,	Shirley,	Wales,
Norwood,	Shrewsbury,	Watertown,
Peru,	Somerset,	Wellesley,
Plymouth,	Southampton,	Westhampton,
Reading,	Stow,	West Newbury,
Richmond,	Sturbridge,	West Stockbridge,
Salisbury,	Sudbury,	Yarmouth. — 61
Scituate,	Tolland,	
Sharon,	Tyringham,	

*Class IV.* — Towns where no appropriations have been made, and no physicians have been appointed: —

Abington,	Gosnold,	Rowley,
Acushnet,	Granby,	Sandwich,
Ashburnham,	Greenfield,	Saugus,
Avon,	Hancock,	Seekonk,
Barnstable,	Lakeville,	Southborough,
Bernardston,	Lanesborough,	Southwick,
Blackstone,	Mattapoisett,	Spencer,
Bourne,	Merrimae,	Swansea,
Burlington,	Middleborough,	Tisbury,
Carver,	Millbury,	Topsfield,
Chatham,	Mount Washington,	Truro,
Chilmark,	Nantucket,	Uxbridge,
Clinton,	North Andover,	Wayland,
Conway,	Northborough,	Wellfleet,
Dalton,	Otis,	Westfield,
Dartmouth,	Paxton,	Weston,
Dover,	Peabody,	West Tisbury,
Draeut,	Provincetown,	Williamstown,
Duxbury,	Randolph,	Wilmington,
Eastham,	Rehoboth,	Windsor,
Edgartown,	Revere,	Worthington,
Gay Head,	Rochester,	Wrentham. — 68
Georgetown,	Rockland,	

*Class V.* — Towns where an appropriation has been made, but no physician appointed: —

Alford,	Buckland,	Plainville,
Boxborough,	Gardner,	Stoughton. — 6

The towns in Class II. should be added to those in Class I. as having complied with the letter of the law and most of them

with its spirit. In a few cases the appropriation was too small to pay for any service. The absence of records is due to the fact that inspection in some towns was deferred until near the close of the school year 1906-07, or to the beginning of the year 1907-08.

#### EYE AND EAR TESTS.

The law of 1906 calls for an annual examination of the vision and hearing of all school children, the tests to be prescribed by the State Board of Health and to be made by the teachers. There being no expense to the towns involved in this examination, no reasonable excuse can be offered for non-compliance; but no examinations were made in the following towns: Monterey, Otis, Sunderland, Tyringham and Weston. Together, these towns have a little over 500 children.

The materials for these tests not having been distributed at the beginning of the school year 1906-07, the tests were not begun until November, and in some places dragged along until the following June.

While in general the actual work was done by teachers, not all the teachers were engaged in it, the principal sometimes doing it for the whole school, or designating two or three teachers to make all the tests. In some cases the superintendent relieved the teachers from the responsibility, not seeing that it was for the teachers also an opportunity.

The vision and hearing tests were made in accordance with the following directions, prescribed by the State Board of Health:—

#### COMMONWEALTH OF MASSACHUSETTS.

##### CHAPTER 502, ACTS OF 1906.

#### DIRECTIONS FOR TESTING SIGHT AND HEARING (PREPARED BY THE STATE BOARD OF HEALTH).

##### *To test the Eyesight.*

Hang the Snellen test letters in a good, clear light (side light preferred), on a level with the head. Place the child 20 feet from the letters, one eye being covered with a card held firmly against the nose, without pressing on the covered eye, and have him read aloud, from left to right, the smallest letters he can see on the card. Make a record of the result. Children who have not learned their letters, obviously, cannot be given this eyesight test until after they have learned them.

[NOTE. — When not in use, the chart of test letters should be placed in the envelope in which it is sent, to keep it from becoming soiled and illegible. When damaged, a requisition should be made on the State Board of Education for a new chart.]

*To record the Acuteness of Eyesight.*

There is a number over each line of the test letters, which shows the distance in feet at which these letters should be read by a normal eye. From top to bottom, the lines on the card are numbered respectively 50, 40, 30 and 20. At a distance of 20 feet the average normal eye should read the letters on the 20-foot line, and if this is done correctly, or with a mistake of one or two letters, the vision may be noted as  $\frac{20}{20}$ , or normal. In this fraction the numerator is the distance in feet at which the letters are read, and the denominator is the number over the smallest line of letters read. If the smallest letters which can be read are on the 30-foot line, the vision will be noted as  $\frac{20}{30}$ ; if the letters on the 40-foot line are the smallest that can be read, the record will be  $\frac{20}{40}$ ; if the letters on the 50-foot line are the smallest that can be read, the record will be  $\frac{20}{50}$ .

If the child cannot see the largest letters, the 50-foot line, have him approach slowly until a distance is found where they can be seen. If 5 feet is the greatest distance at which they can be read, the record will be  $\frac{5}{50}$  ( $\frac{1}{10}$  of normal).

Test the second eye, the first being covered with the card, and note the result, as before. With the second eye have the child read the letters from right to left, to avoid memorizing. To prevent reading from memory, a hole  $1\frac{1}{2}$  inch square may be cut in a piece of cardboard, which may be held against the test letters, so as to show only one letter at a time, and may be moved about so as to show the letters in irregular order. A mistake of two letters on the 20 or the 30 foot lines, and of one letter on the 40 or 50 foot lines, may be allowed.

Whenever it is found that the child has less than normal sight,  $\frac{20}{20}$ , in either eye, that the eyes or eyelids are habitually red and inflamed, or that there is a complaint of pain in the eyes or head after reading, the teacher will send a notice to the parent or guardian of the child, as required by law, that the child's eyes need medical attention.

*Method of testing Hearing.*

If it is possible, one person should make the examinations for an entire school, in order to insure an even method. The person selected should be one possessed of normal hearing, and preferably one who is acquainted with all of the children, the announcement of an examination often tending to inspire fear.

The examinations should be conducted in a room not less than 25 or



30 feet long, and situated in as quiet a place as possible. The floor should be marked off with parallel lines one foot apart. The child should sit in a revolving chair on the first space.

The examination should be made with the whispered or spoken voice; the child should repeat what he hears, and the distances at which words can be heard distinctly should be noted.

The examiner should attempt to form standards by testing persons of normal hearing at normal distances. In a still room the standard whisper can be heard easily at 25 feet, the whisper of a low voice can be heard from 35 to 45 feet, and of a loud voice from 45 to 60 feet.

The two ears should be tested separately.

The test words should consist of numbers, 1 to 100, and short sentences. It is best that but one pupil at a time be allowed in the room, to avoid imitation.

For the purpose of acquiring more definite information concerning the acuteness of hearing, one may have recourse to the 512 v. s. (vibrations per second) tuning fork and the Politzer acoumeter.

For very young children a fair idea of the hearing may be obtained by picking out the backward or inattentive pupils, and those that seem to watch the teacher's lips, placing them with their backs to the examiner, and asking them to perform some unusual movement of the hand, or other act.

### RESULTS OF TESTS.

The returns from 349 of the 354 cities and towns show that 432,937 children were examined, and that 96,609 appeared to be defective in a greater or less degree in vision and 27,387 in hearing. This is an average of 22.3 per cent. for the eyes and 6.3 per cent. for the ears. The following are the results by counties:—

COUNTIES.	Defective vision (per cent.).	Defective hearing (per cent.).
Barnstable, . . . . .	16.8	6.0
Berkshire, . . . . .	18.2	5.4
Bristol, . . . . .	20.1	6.4
Dukes, . . . . .	23.8	4.7
Essex, . . . . .	22.0	6.0
Franklin, . . . . .	20.5	7.9
Hampden, . . . . .	19.7	6.5
Hampshire, . . . . .	18.3	6.1
Middlesex, . . . . .	21.5	5.9
Nantucket, . . . . .	No returns.	No returns.
Norfolk, . . . . .	16.0	5.3
Plymouth, . . . . .	15.8	4.2
Suffolk, . . . . .	30.7	7.7
Worcester, . . . . .	19.0	6.3

Omitting Suffolk County, the returns from the rest of the State show 19.9 per cent. of defective vision and 5.8 per cent. of defective hearing.

The figures show that there are wide extremes in the ratio of children having defective vision. For example:—

In Chilmark, of 28 children examined, 17, or 60 per cent., are reported as having defective vision.

In Saugus, of 1,281 examined, 603, or 47 per cent., are reported as defective.

In Ipswich, of 682 examined, 243, or 35 per cent., are reported as defective.

At the other extreme stand:—

TOWNS.	Children examined.	Per cent. de- fective vision.
Plainville, . . . . .	216	7.80
Leyden, . . . . .	52	7.50
Rochester, . . . . .	134	6.70
Harvard, . . . . .	136	6.60
Middleton, . . . . .	160	6.25
Plympton, . . . . .	50	4.00
Halifax, . . . . .	78	2.60

These differences may represent actual differences in the children, or they may be due to differences in the conditions under which the tests were made, as in poorly lighted rooms, or to differences in the skill and care with which the tests were made. Teachers cannot be expected to rise above their usual level in doing such work as this.

Some surprise has been expressed that the law did not require this work to be done by specialists. It ought to be known that specialists themselves recommended that this preliminary examination should be made by teachers, deeming it to be wholly within their capacity, and thinking that the children would be subjected to less nervous strain than if tested by a stranger, and therefore exhibit themselves in a more natural way.

It is the intention of the law that a scientific examination

by specialists shall be made in cases where defects are apparently revealed by the teachers' tests.

For this purpose the teachers are to notify the parents of apparent defects, and advise consulting a specialist. The returns show that notifications have been sent in 84,012 cases.

Criticism has been made that parents who have followed the suggestions and have consulted oculists have been told by them that no defect exists. Many parents and some practitioners have jumped to the conclusion that the school inspection is a failure. This is illogical and unfair.

The teachers' tests seemed to show defect. As a matter of fact, in a great many cases the defects actually exist. Over-precaution is better than carelessness and neglect. Cases are numerous in which the most serious defects have existed for years, unknown to teachers, to parents and to the children themselves, and these are not confined to homes of ignorance. In a paper read in August in London, Dr. Stackler of Paris stated that in almost half the cases of defective sight discovered by him as medical examiner in schools, the parents were unaware of the defect; and in all the cases of defective hearing, — 36 per cent. of the 753 boys examined, — both parents and teachers were ignorant of the fact that the child did not possess normal hearing.

In communications received from teachers such expressions are found as "It is a revelation to me." "I am astonished at the results." "I am ashamed that I have not known my children better."

It has been deemed best not to notify parents in the future, when the deviation from normal vision is slight. The following supplementary direction has been sent: —

#### COMMONWEALTH OF MASSACHUSETTS.

##### CHAPTER 502, ACTS OF 1906.

#### SUPPLEMENT TO DIRECTIONS FOR TESTING SIGHT AND HEARING (PREPARED BY THE STATE BOARD OF HEALTH).

##### *Notification of Parents.*

The teacher will notify the parent or guardian on one of the notice cards, as required by law, whenever the vision in either eye falls below  $\frac{20}{30}$ . No notice will be sent when the vision is  $\frac{20}{20}$  in one eye and  $\frac{20}{30}$

in the other, or 20% in both eyes. A notice card will also be sent when the teacher finds that the eyes or eyelids are habitually red and inflamed; when there is complaint of pain in the eyes or head after reading or writing, especially toward the end of school hours; when one or both eyes deviate from the normal position,—squinting; when the book is habitually held at less than one foot from the eyes, and there is scowling and evident effort in using the eyes.

No provision of law exists by which parents may be compelled to seek expert advice, and there are no statements available to show how many parents actually do so. Estimates vary from 25 to 75 per cent.

In some cases the advice sought cannot be called expert. Itinerant spectacle venders have imposed upon many parents, and dealers in cheap glasses advertising free examination of eyes have probably imposed upon more. Some eyes will undoubtedly be injured by quack prescriptions. It will be one of the duties of the school physician to be on the watch for such cases.

Many parents cannot afford suitable glasses for their children. Every school committee should deal with this problem in a systematic and business-like way. Arrangements should be made with reputable oculists to furnish suitable glasses at a minimum price, and means should be found to pay for them. If the money appropriated for schools cannot be used for them, private charity should be invoked for the purpose.

The second general test, which under the law must be made during the school year 1907-08, should serve to correct or verify the results of the first test, and will probably furnish data for some modifications of the law. It may be that for children of apparent normal vision and hearing the tests may be less frequent than annually, unless defects are suspected.

School physicians should consider it a part of their duty to assist and advise the teachers in these inspections.

#### REPORTS FROM INSPECTION BY PHYSICIANS.

As already stated, reports of inspection have been received from 23 cities and 102 towns. They include only 76 per cent. of the average membership of the public schools of the State, but the figures are sufficiently large to show that the State has

not moved too soon in the effort to safeguard the school children. The number of children reported as suffering from diseases or defects is as follows:—

Diphtheria, . . . . .	238	Otitis, . . . . .	407
Scarlet fever, . . . . .	313	Other diseases of the ear, .	363
Measles, . . . . .	637	Conjunctivitis, . . . . .	779
Whooping-cough, . . . . .	973	Other diseases of the eye, .	2,159
Mumps, . . . . .	367	Scabies, . . . . .	1,054
Chicken-pox, . . . . .	548	Pediculosis, . . . . .	7,691
Influenza, . . . . .	276	Impetigo contagiosa, . . .	1,568
Syphilis, . . . . .	36	Ringworm, . . . . .	715
Tuberculosis, . . . . .	115	Other diseases of the skin, .	1,170
Erysipelas, . . . . .	17	Chorea, . . . . .	105
Adenoids, . . . . .	2,525	Epilepsy, . . . . .	41
Other diseases of the oral and respiratory tract, .	5,103	Deformities (spinal and ex- tremities), . . . . .	142

If the same proportions hold for the rest of the schools, the aggregate effect upon school attendance and school work is a subject for most serious thought.

#### CLOSURE OF SCHOOLS.

In consequence of the presence of some infectious disease, chiefly diphtheria, scarlet fever or measles, during the school year of 1906-07, 318 schoolrooms were closed and classes dismissed. These rooms were in 70 towns. The classes included 12,122 children. The closure lasted from one day to four weeks.

During the same year there were 215 deaths of school children known to the school officers reporting. Most of the officers replied to the question that they had no means of knowing of the deaths.

The waste of money involved in the cessation of work for days or weeks of more than 300 teachers and the loss of schooling suffered by the 12,000 children is a matter of no small moment; but what we may read into the statistics of diseases and defects not numerous or serious enough to cause the closure of the school is of much greater moment.

The amount of physical pain and discomfort caused by the various diseases of the eye and ear, by adenoids, by itch and

lice and St. Vitus's dance, is enough to account for a large part of the inattention and restlessness, the slowness and the dullness which prevail in the schools.

If "there was never yet philosopher could bear the toothache patiently," how can the schoolroom virtues of attention and order and obedience and industry be expected to flourish in a school where from 50 to 75 per cent. of the children never use a toothbrush and never receive a dentist's care?

And what can be said for the probabilities of successful school work in a school where a large proportion of the children are suffering from vermin in their heads? Were the children who are the immediate victims of the want of parental care, who come from filthy homes, the only sufferers, the case would be bad enough; but the innocent suffer with the guilty, as is shown in the following extract from a letter recently received at the office of the Board of Education:—

Is there nothing that can be done about "cleaning up" the scholars? It seems to me 'tis rather an unfair thing to force the clean and the unclean children into such close contact as is necessary in a crowded New England hill town schoolroom. A few vermin-infected children can furnish "stock" enough to inhabit both heads and bodies of a whole school, unless the utmost vigilance is exercised by the mothers. Now, the life of the average hill town farmer's wife, with "Rooseveltian families" but *not* "Rooseveltian" means of taking care of them, is no sinecure at best; but when it comes to spending hours each day combing heads for vermin "gotten at school," and spending no inconsiderable sum on vermicides and fine combs, her hands are more than full.

There seems to be no law which forces mothers to send their children to school clean,—if there is, it certainly is not enforced in this vicinity; but why can't there be something done about cleaning them up, systematically, in school? There is much money expended in the cause of education. We have special teachers in music; children are taught sewing, drawing, hygiene, etc.; we also have a school superintendent; yet, withal, the schools seem to be far from perfection while a so-called civilized community allows so much filth to exist in them.

Surely the first step toward education is civilization, and the first step towards civilization is cleanliness. If some of the parents are but half civilized, and the children are allowed to pass through all the grades of our excellent (?) schools in positive filth, what can we expect of the next generation?

This letter shows that the evils which we have been accustomed to attribute to city conditions are widespread. It was a father in a country town who recently remarked in public: "That fool superintendent sends children home from school just because they have a few lice in their heads."

Immigration has carried into the rural communities families whose standard of living is too low to promote cleanliness or health. For the sake of the children who come from clean homes, the utmost vigilance should be used by school authorities in securing at least cleanliness of person and clothing, even if the more serious physical defects remain for a time unrelieved.

If the public schools are to continue to be schools for all the children, they must be made and kept morally and physically clean. Parents who care for their children will not indefinitely subject them to school conditions and influences which are a menace to their health or their morals.

#### THE RELATION OF PHYSICAL DEFECTS TO SCHOOL WORK.

No thorough investigation has yet been made to show to what extent the various defects and disabilities found in the schools have affected the school work of the sufferers. The effects in individual cases are more easily discovered, and the reports of many such have found their way into print. Several cases recently reported by teachers are as follows:—

*Case A.*—A boy was indolent, restless and inattentive. I thought this was due to carelessness, and punished him accordingly. Since he has been fitted to glasses I have seen a marked and steady improvement in his work, and in June he is to be promoted to a higher class, with good marks.

*Case B.*—A boy complained of pain in the ear. He was heedless, listless and dull, and had been absent sixteen weeks during the year ending in June. On account of his absence and inattention he was not promoted. The test made in the fall term showed a very bad case of defective hearing, and furthermore revealed the fact that the boy was in a very poor physical condition. He was successfully operated on by a physician. Since his recovery he has been absent but three days, and those were stormy ones.

*Case C.*—Upon one of his visits to the schools the school physician was asked to interview a young girl who had given evidence to the

teacher of being in a somewhat weakened condition. The school physician made a careful examination of the child, and found her to be in an anæmic condition, with very little vitality, likely to contract any disease, or to become so much weakened as to necessitate her remaining home from school, and possibly not recovering. This child aroused the suspicions of the teacher and physician as to the home conditions. The parents were called in consultation and questioned as to the habits, the amount of food and amount of sleep the child had. It was found, according to their own statements, that the child had received insufficient nourishing food to maintain the growing body. The parents were informed of this by the medical inspector, and advised to consult the family physician to improve the conditions. This was done, and in a few weeks the child showed marked improvement in her school work. The parents went to the medical inspector and thanked him heartily for his efforts, and told him that they realized they had been starving their child, and expressed their surprise that they had not appreciated her condition. It seemed to the school officers that the improvement in this one case had amply justified the expenditure made for medical inspection. This girl was a member of the fifth grade.

*Case D.* — In a second grade was found a boy who had the habit of mouth breathing. He was restless, unable to do his work, unable to concentrate. He could not read or do his number work with the same skill or accuracy as the other members of his class, although he had previously given evidence of having a good mind. His case was called to the attention of the medical inspector, who on examination found that it was an impossibility for him to breathe through his nose, and difficult for him to breathe through his mouth. His body had become emaciated, his complexion sallow, blood impure. After much persuasion, his parents, who were poor, were induced to take the boy to a specialist, who removed the growths. The boy returned after two weeks, and seemed to have regained all he had lost in health, and rapidly caught up with the work of the class. He was able to do more work, better work, and was less trouble in the schoolroom.

*Case E.* — A boy in the eighth grade, who was extremely nervous, but nevertheless who showed rather more than ordinary ability, was found to be blind in one eye, and this entirely unknown either to himself or to his parents; but it gave the teacher an opportunity to understand certain actions of the boy, from a disciplinary standpoint, which it had been impossible to understand previous to this time.

In many of the grammar schools of Boston are “ungraded classes” made up of children who are too old to be kept in the lowest grades, but who are not ready to do the work of the higher ones.



Inquiry concerning the results of the eye and ear tests in those classes reveals some significant facts. For example, in the Emerson school, in the ungraded class of 40 children, 20 children, or 50 per cent., were found defective in sight; 15 children, or 37 per cent., defective in hearing; and 26 children, or 65 per cent., defective in both sight and hearing; leaving but 5 children, or 12.5 per cent., having normal sight and hearing. In the remaining 15 classes, containing 707 children, 236, or  $33\frac{1}{3}$  per cent., were found defective in sight; 30, or 4 per cent., defective in hearing; and 257, or  $36\frac{1}{3}$  per cent., defective in both sight and hearing. Of the whole 16 classes, 24 per cent. were defective in sight and  $5\frac{4}{5}$  per cent. defective in hearing. The number of defectives in hearing in the ungraded classes, as compared with the rest of the school, is strikingly large.

In the Lawrence school, of 66 boys in the ungraded classes, 42 boys, or 64 per cent., had defective eyesight and 6 boys defective hearing. Of the 473 boys in the remaining classes, 177, or 37 per cent., had defective sight and 20 defective hearing.

In the Martin school over 40 per cent. of the pupils in the ungraded classes were found to be defective in sight or hearing, while the average for the district was between 20 and 25 per cent.

The following table of results in the Hyde school (girls) is interesting on account of the comparison made between the first and second divisions of the same grade, the division being based on ability to do the work of the grade:—

*Report of Eyes and Ears, — Hyde School.*

CLASSES.	Average age.	EYES AND EARS.			EYES.			EARS.		
		Number of pupils examined.	Normal eyes and ears.	Per cent. normal.	Number of pupils examined.	Normal eyes.	Per cent. normal.	Number of pupils examined.	Normal ears.	Per cent. normal.
Grade IX., . . . . .	15-	46	17	37	46	21	46	46	29	63
Grade VIII., division 1, . . . . .	14	47	25	53	47	29	62	47	37	79
Grade VIII., division 2, . . . . .	14-4	45	9	20	45	23	51	45	18	40
Grade VII., division 1, . . . . .	13-	48	19	40	50	21	42	48	38	79
Grade VII., division 2, . . . . .	13-	49	4	8	49	28	57	49	8	16
Grade VI., division 1, . . . . .	12-	48	24	50	49	27	55	48	37	77
Grade VI., division 2, . . . . .	12-	50	15	30	52	25	48	51	30	59
Grade V., division 1, . . . . .	10-	49	14	29	49	18	37	49	29	59
Grade V., division 2, . . . . .	10-6	51	19	37	51	27	53	51	31	60
Grade V., division 2, . . . . .	13-3	54	15	15	55	23	42	54	14	26
Grade IV., division 1, . . . . .	10-	53	18	34	54	27	50	53	31	58
Grade IV., division 2, . . . . .	9-8	53	27	51	55	38	69	53	35	66
Grade IV., division 2, . . . . .	10-	45	14	31	51	19	37	45	23	51
Ungraded school, . . . . .	11- {	43	2	5	44	13	30	44	10	23
		681	215	32	697	339	49	684	370	54

It should be said that in several other schools the principals reported that they had discovered no larger proportion of defectives in the ungraded than in the other classes in the school. It would seem that the basis of classification must be different in the different schools.

From a report on the examination of the eyes of 420 children in the Pierce school, Brookline, by Robert G. Loring, M.D., clinical assistant, Massachusetts Charitable Eye and Ear Infirmary, printed in the report of the superintendent of schools of Brookline for 1906, I extract the following:—

One point in this subject of the eyes of school children interested me especially, viz., the relation between refractive errors in children and their standing in scholarship. In order to get some data on this point, I sent the record cards of each child to its teacher, and asked her to indicate its mark in scholarship. I found the children were marked with one of five grades: excellent, good, fair, unsatisfactory and poor. Dividing the children again into my three divisions,—first, those with normal eyes; secondly, those with little refractive error and fairly good sight; and thirdly, those with large refractive errors, poor vision or troublesome symptoms,—I found that a great majority of the good students belonged to the first two classes, especially the first, and that a majority of the poor students belonged to the third class. For instance, out of all the children, 86 reached the grade of excellent, and 43, or one half, belonged to the class with perfect eyes, while the third class of defectives furnished only 12; or in other words, 50 per cent. of the excellent had normal eyes, and only 14 per cent. of the excellent came from class 3, with defective eyes. In the middle grades of scholarship the figures were less striking, but, as before, the majority of the good scholars came from the first two classes with perfect or nearly perfect eyes. For instance, among 137 marked good in scholarship, more than two thirds came from the first two classes and less than one third from the third class. In the same way, among those marked fair, 52 of the normal reached this grade against 28 from the deficient. On the other hand, in the lowest grades of scholarship the defective eyes were the majority. Among 38 marked unsatisfactory, only 4 were normal as to vision, and 15 were from the third class; and in the lowest grade of poor, 42 in all, twice as many had deficient eyes as were normal.

Of course many allowances must be made in these results for the individual variations in the children in industry and intelligence; but I think these figures strongly suggest that refractive errors and the latent symptoms of eye strain do account for a large part of poor scholarship, and that a large number of poor scholars are probably

suffering from defective eyes, though often having good vision. This is a matter of every-day experience to the oculist. Children are constantly being brought who have good enough vision when tested in the ordinary way, but complain of difficulty in doing their school work, and on examination with a mydriatic are found to be suffering with marked degrees of far-sightedness or astigmatism, and with proper glasses return to their work without further trouble. Even adults often suffer from marked symptoms of eye strain without being conscious that their eyes are the things chiefly at fault, and this is much more common among children. In this connection it should be understood that the recent act passed by the Legislature, providing for the examination of the vision only of school children by the *teachers*, while a step in the right direction, will in itself be quite inadequate as a means of finding out all those who are in reality suffering from eye strain.

I found, in comparing the results from the lowest to the highest grades, that the proportion of the normal children gradually fell off; for instance, in the fourth grade one half of the children qualified for class one, that is, had normal eyes and complained of no symptoms; while in the highest grade the majority belonged to the second or slightly defective class, and the number in rather urgent need of further examination and treatment equalled the number that were perfect. This coincides with the results of other examinations that have been made among school children; namely, that with advancing education the proportion of normal eyes steadily diminishes, and we find an increasing number of near-sighted and astigmatic children.

Regarding the hearing tests the report makes the following statement:—

In comparing the hearing tests with the scholarship, it is found that, of the pupils marked with the grade of "excellent," 17 per cent. showed diminished hearing; of those marked "good," 20 per cent. showed diminished hearing; of those marked "fair," 30 per cent. showed diminished hearing; of those marked "unsatisfactory," 52 per cent. showed diminished hearing; of those marked "poor," 42 per cent. showed diminished hearing.

In a paper read by Dr. J. J. Cronin of New York, at the London Congress, a paper which attracted much attention and stimulated discussion to an unusual degree,—the relation of physical defects not only to school standing but to crime and general social inefficiency being treated,—the following illustrative case was cited:—

In one school there was a special class of 150 defectives. This class was composed of backward and incorrigible and truant children, and so-called "impossibles." The physical examination of these showed the following:—

Number examined, . . . . .	150
Number defective, . . . . .	150
Number with defective vision, . . . . .	13
Number with adenoids, enlarged tonsils or both, . . . . .	137

The examinations were made by an inspector who devoted his entire time to the study of the diseases of children. Special effort was made during six months to get these children operated on. Parents were neglectful, and for one reason or another only 56 children were attended to. It was then thought justifiable to get information as to what scholastic results would be obtained if these children were operated on collectively.

Written consent was readily obtained from parents to perform the necessary operations. On June 21, 1906, 81 children were operated on by three specialists of Mt. Sinai Hospital. Six months later 76 of these children were re-examined, and without exception they had all been promoted, and were doing well in their advanced grades.

#### REGULATIONS FOR GUIDANCE OF SCHOOL PHYSICIANS.

The work of the school physicians during the first year of service seems to have been for the most part left without specific directions or guidance. This ought not to continue, if the work is to be effective.

Whether the physicians are employed by boards of health or by school committees, their work should be prescribed by rule, at least in a general way. The annual examination of all the children required by law should first be provided for. This should be early in the year, and should especially include young children just entering school. The frequency of subsequent visitation should be fixed, and their relations to the teachers determined. Regular reports should be made at least monthly. The rules should include restrictions to prevent interference with the functions of the family physician, and under no circumstances should the school physician be open to the charge of promoting his own private professional interests through his public service.

Conferences of school physicians with school committees

should be held, and it might be well for the rules to require that the physicians should periodically meet with the teachers for conference and instruction.

In several cases printed copies of rules have accompanied the reports to the Board of Education. The following are some of them: —

LAWRENCE.

*Duties of School Physicians.*

SECTION 1. The school physician shall have general oversight of the sanitary condition of schoolhouses. He shall file with the superintendent, for reference to the committee on schoolhouses and sanitation, all recommendations for better conditions of heating, lighting, ventilating and sanitary cleanliness.

SECTION 2. He shall make an examination of every pupil referred to him by the principals or teachers as to eyesight, hearing, accident, illness, suspected contagious diseases, as smallpox, scarlet fever, measles, chicken pox, tuberculosis, diphtheria, influenza, whooping cough, scabies, trachoma, etc., and if found to be suffering from any of the above the pupil shall at once be sent home.

SECTION 3. He shall vaccinate all pupils applying for admittance to the public schools whose parents cannot employ the services of a physician. He shall be present at the office of the superintendent for this purpose on Mondays, Wednesdays and Fridays during the month of September, and on Tuesdays and Fridays thereafter.

SECTION 4. He shall consult with the principals, and devise the best course to pursue in certain cases of defective eyesight and hearing, with the object of having the pupils with such defects derive the full benefit of their school work, or to modify the school work so as to prevent further injury to the pupils with such defects.

SECTION 5. In certain cases the school physician shall, at the request of the truant officers, examine pupils who are absent from school for unknown cause, to ascertain whether or not they are able to attend school.

SECTION 6. The examination of eyesight and hearing shall be made by the teacher, and if found defective shall be referred to the school physician for further examination. The physician in turn shall notify the parents or guardian of such defect.

SECTION 7. He shall give instructions to the teachers as to the proper method of detecting defective hearing and eyesight, proper ventilation and sanitation, and the detection of certain forms of illness.

SECTION 8. In accordance with section 3, chapter 502, Acts and Resolves of 1906, he must examine children returning to school without a certificate from the board of health, after absence for unknown cause, with a view to keeping all infectious diseases from the schoolroom.

SECTION 9. The school physician when he sends a pupil home shall send a written communication to parents or guardian, stating the reasons why said pupil was dismissed.

SECTION 10. He shall see that the janitors keep their buildings in a clean condition, so as not to endanger the health of any pupil.

SECTION 11. He shall visit each school for a thorough inspection at least once a week, and oftener if the superintendent or principal of a school deem it necessary.

SECTION 12. He shall similarly inspect the evening schools as to eyesight, hearing, contagious diseases and illness of pupils while at school.

SECTION 13. He shall examine certain cases where pupils ask exemption from evening school on certificates that are not satisfactory to the school authorities.

#### MONSON.

*Regulations for the Guidance of the School Physicians of the Town of Monson, approved by the School Committee May 1, 1907.*

1. Each school physician shall separately and carefully test and examine every child in the public schools assigned to him at least once a year, to ascertain whether he is suffering from any disability or defect, other than defective sight or hearing, tending to prevent his receiving the full benefit of his school work, or requiring a modification of his school work in order to prevent injury to the child or to secure the best educational results. This examination shall be made during the fall term.

2. He shall visit the village schoolrooms assigned to him once a week, and the rural schools assigned to him once each term, to examine and diagnose any children referred to him, and to make such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require.

3. He shall make other visits to examine pupils when requested to do so by the teachers.

#### NORTHAMPTON.

*Duties of the Medical Inspector of the Public Schools of Northampton, Mass.*

1. The medical inspector of schools shall visit each of the following schools once in two weeks during the school year: Bay State, Bridge Street, Centre Street, Florence grammar, Hawley grammar, Leeds, Pine Street, Prospect Street, South Street, Vernon Street, Williams Street.

2. He shall, so far as possible, make his visits on a regular schedule, on fixed hours and days, by arrangement with the school authorities.

3. He shall see pupils in other schools than the above at the request of the superintendent of schools.

4. He shall keep a record of the dates and results of examinations of pupils on the card index provided for that purpose.

5. He shall record also the date of the last *successful* vaccination of all pupils examined, and notify their parents or guardians when he believes vaccination to be necessary.

6. He shall exclude from school all pupils suffering from contagious or infectious diseases, and notify their parents or guardians of the exclusion and the reason therefor, and the conditions under which such pupils may be readmitted.

7. He shall notify the parents or guardians of pupils of all physical defects or ailments found on examination, which, in his opinion, require medical treatment, and recommend that the family physicians be consulted.

8. He shall not prescribe for or treat pupils himself, except at the request of their parents or guardians.

9. He shall take swabs for bacteriological examination from all suspicious throats.

10. He shall give such special attention to conditions in any school where an epidemic is threatened as may appear necessary.

11. He shall from time to time inspect the sanitary condition of the school buildings and rooms.

#### SOUTH HADLEY.

##### *The Public Schools of South Hadley. — Rules for the Medical Inspection of the Schools.*

1. For the purpose of medical inspection, the schools of South Hadley shall be divided into districts as follows: —

South Hadley Falls: District No. 1, grades 1 to 3*a* inclusive; District No. 2, grades 4 to 7 inclusive; District No. 3, grades 8, 9, the high school, the North Main Street school and the Plains school.

South Hadley Center: District No. 4, the Center school, all grades.

2. The medical inspectors will visit all schools in their respective districts during the first and third weeks of each school month, and shall also be subject to the call of the school authorities on any occasion demanding special inspection.

3. The medical inspectors, at the time of their visits, will make examination of all children referred to them by principals or teachers, and such further examination of the school buildings as in their judgment may seem necessary.

4. The principal or teacher shall refer to the medical inspector: —

(*a*) Every child returning to school after absence on account of illness or some unknown cause.

(*b*) Every child showing signs of being in ill health, or of suffering from some infectious or contagious disease.

(*c*) Every child returning to school after exclusion by order of the medical inspector.



5. Children showing signs of any of the following diseases shall be sent home immediately:—

Smallpox,	Diphtheria,	Mumps,
Scarlet fever,	Trachoma,	Pediculosis,
Measles,	Influenza,	Ringworm,
Chicken pox,	Whooping cough,	Impetigo contagiosa.
Tuberculosis,	Tonsilitis,	

6. A child who has been excluded from school on account of illness with contagious disease may return to school upon presentation of a certificate, signed by a regular practising physician, stating that such child has recovered and that the danger of carrying such disease by such child has passed.

7. A child who is a member of a household in which a person is ill with smallpox, diphtheria, scarlet fever, measles or any other infectious or contagious disease, shall not attend any public school during such illness until the teacher of the school has been furnished with a certificate, signed by a regular practising physician, stating that danger of conveying such disease by such child has passed.

8. Under chapter 502 of the Acts of 1906, the tests of sight and hearing shall be made by the teachers.

9. Teachers will keep a record of all children referred by them to the medical inspectors, and of all children excluded from school; and for this purpose shall fill out the blank forms prescribed by the school board, viz., the *exclusion card*, which shall be given in a sealed envelope to the child to take home, the *teacher's record card*, and the *report* to the superintendent, to be sent at the end of the first and third weeks of each school month.

10. The medical inspector's attention should be called to any of the following conditions: animal parasites in the hair; sores, crusts or scabs in hair or about the head, face, arms or hands; peeling of the skin about the forehead, arms or fingers; pimples between the fingers; enlarged glands; redness or sensitiveness of the eyes, or discharge from the eyes or ears.

#### WALTHAM.

##### *Rules of the School Committee establishing Medical Inspection.*

SECTION 1. The mayor shall appoint each year, subject to the approval of the board, a standing committee on medical inspection, who shall consider all matters relating to the health and physical welfare of pupils.

SECTION 2. School physicians shall be nominated by the board of health at its first meeting in June, subject to confirmation by the school committee.

SECTION 3. School physicians shall serve for the term of one year from the first day of September in each year, or until their successors are nominated and confirmed.

SECTION 4. Assignments shall be made by the chairman of the board of health after consultation with the superintendent of schools.

WM. D. PARKINSON, *Clerk.*

*Amended Jan. 1, 1907.*

*Rules to govern Medical Inspection.*

SECTION 1. Each school physician shall before 10 A.M. on each school day visit at least one of his schools, and put himself in communication with all the schools assigned to him, to ascertain whether they have pupils to refer to him, and shall visit forthwith those which report in the affirmative. He shall in any case visit each of his schools as often as once a week:

SECTION 2. Every school physician shall make a prompt examination and diagnosis of all children referred to him as hereinafter provided, and such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require, and shall advise as to the course to be followed in each instance.

SECTION 3. Teachers shall co-operate with the physician, and shall refer to him for examination and diagnosis every child returning to school without a certificate from the board of health after absence on account of illness or from unknown cause; and every child in school who shows signs of being in ill health or suffering from infectious or contagious disease (unless the cause is such as to call for exclusion before the arrival of the physician). All children whose vaccination is in question shall be referred to him.

A teacher also who has been absent on account of illness shall consult the medical inspector upon her return.

SECTION 4. The following specific infectious diseases should be excluded from school without delay, and the children sent to their homes; the board of health should at once be notified, and report be made to the office of the superintendent of schools:—

*Class A.*—Smallpox, scarlet fever, measles, chicken pox, tuberculosis, diphtheria or influenza, tonsillitis, whooping cough, mumps, scabies or trachoma.

SECTION 5. The following contagious affections are to be temporarily excluded until under treatment:—

*Class B.*—Pediculosis, ringworm, impetigo, acute coryza, acute conjunctivitis.

In such cases, the pupils shall be instructed to report at school after two days, and then if found to be under treatment may be allowed to attend; but if still excluded for failure to begin treatment, and the

pupil continues to stay away, the case shall be reported to the truant officer for investigation.

SECTION 6. Information should be given to parents through the teacher of the following non-contagious but perhaps disabling diseases:—

*Class C.*—Enlarged tonsils or adenoids (mouth breathers), defective eyesight or hearing, spinal curvature, chorea, epilepsy and all nervous disorders, or any other diseases (using Osler's text-book as a standard for diagnosis) which are objectionable in school, or a source of mental or physical disability.

SECTION 7. When the school physician finds a child to be suffering from any disease or defect, he shall make out and sign a statement containing the pupil's name, room number and school, together with his diagnosis and advice, which shall be placed on file by the teacher; and a copy shall be given the pupil in a sealed envelope, to be taken to the parent or guardian.

If any infectious disease of the nose or throat is suspected, a culture shall be taken, and the tubes sent to the board of health for examination.

SECTION 8. If a pupil or any member of the family from which the pupil comes has been ill with any infectious disease of class A, requiring disinfection, a certificate of the board of health showing release from quarantine and disinfection of the premises must be presented to the school physician before admission of such pupil to school.

SECTION 9. Under no circumstances or provocation shall any controversy be carried on among teachers, parents or physicians. Whenever the necessity for the continued exclusion of the child is brought in question, the case shall be referred to the superintendent of schools.

SECTION 10. Each school physician in co-operation with the teacher shall at least once in the school year separately and carefully examine every child, to ascertain whether he is suffering from any disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification thereof in order to prevent injury to the child or to secure the best educational results.

SECTION 11. Each school physician shall be held responsible for the proper condition of health in his schools, and may make such inspections in addition to the above as he deems necessary to secure that end.

SECTION 12. Under no circumstances shall a school physician treat any disease, or require pupils to be sent to his house or office. The parents shall be urged to consult their family physicians in all cases.

SECTION 13. A monthly report shall be made by each school physician to the superintendent of schools, on blanks furnished for that purpose, of the number of pupils examined; the number of negatives; the number excluded; the number recommended for treatment or special adjustment of work; the diagnosis (classified) of excluded and recommended cases.

SECTION 14. If by reason of illness or other cause a school physician is unable to report for duty, he shall send notice to the office of the superintendent of schools by 9 A.M., and one of the other physicians may be called upon to visit such of his schools as require immediate attention.

SECTION 15. Each teacher shall, at least once in every school year, separately and carefully test and examine every child in her room, to ascertain whether he is suffering from defective sight or hearing, or from any other disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification thereof.

In case of defects of sight or hearing requiring treatment, notice shall be sent to the parent or guardian. Other disabilities or defects shall be referred to the school physician.

All cases found to require treatment or special precautions shall be noted upon the pupil's record card.

WM. D. PARKINSON, *Clerk.*

*As amended Jan. 1, 1907.*

#### WINCHESTER.

#### *Duties of the Medical Inspector of the Public Schools, Town of Winchester, Mass.*

1. The medical inspector of the schools shall visit each school building once in two weeks during the school year.

2. He shall, so far as possible, make his visits on a regular schedule, on fixed hours and days, by arrangement with the school authorities.

3. He shall see pupils at other times than the above, at special request.

4. He shall keep a record of the dates and results of examination of pupils on the card index provided for that purpose.

5. He shall exclude from school all pupils suffering from contagious or infectious diseases, and notify their parents or guardians of the exclusion and the reason therefor, and the conditions under which such pupils may be readmitted.

6. He shall notify the parents or guardians of pupils of all physical defects or ailments found on examination, which, in his opinion, require medical treatment, and recommend that the family physician be consulted.

7. He shall not prescribe for or treat pupils himself in his official capacity, except at the request of their parents or guardians.

8. He shall take swabs for bacteriological examination from all suspicious throats.

9. He shall give such special attention to conditions in any school where an epidemic is threatened as may appear necessary.

10. He shall, from time to time, inspect the sanitary condition of the school buildings and rooms.

Some of these rules seem to imply that the school physician may exclude children from school. Under the school laws of the State, the only party having authority to exclude from school seems to be the school committee. The physician may recommend exclusion, but the formal notice should be issued in the name of the school committee.

It may be of interest to compare a foreign code of rules with our own: —

EDINBURGH, SCOTLAND.

*Edinburgh School Board. — Regulations for the Medical Officer of Schools.*

1. He shall advise the board as to new sites, plans of new schools, and also, when required, as to school apparatus; he shall exercise a general supervision over the ventilation, heating, lighting and cleanliness of the schools; he shall periodically inspect all school lavatories and other sanitary installations, and he shall report immediately to the head master, and, if necessary, to the superintendent of works, any insanitary conditions discovered.

2. On receiving intimation of an outbreak of infectious disease among the pupils attending any school, he shall at once inquire into the outbreak; he shall take such action as may be immediately necessary, and he shall, as soon as practicable, report the result of this inquiry to the board, and to the medical officer of health for the city, and shall co-operate with him in any measures he may propose for the prevention of infection.

3. He shall advise the board as to the necessity for periodic disinfection and cleansing of the schools, with a view to the prevention of disease.

4. He shall make such examination as the board may require as to the mental and physical condition of children selected for special schools or classes, and shall grant any necessary certificates.

5. He shall medically superintend all special schools and classes; he shall keep the board informed of the mental and physical progress of the children, and he shall indicate any measures that may be advisable for the preservation or promotion of their health.

6. On receiving intimation from the chief attendance officer that a child is absent from school on account of alleged illness, he shall, where a medical certificate is not produced, inquire into the case and report to the board.

7. He shall advise the board as to the children remitted to any day industrial school, and shall make such medical examinations and reports as may be required.

8. To the extent and in the form prescribed from time to time by the board, he shall medically examine the pupils attending the schools, and shall preserve and maintain on approved schedules a record of the examination of each child.

9. He shall organize and superintend such systematic measurements and observations as the board shall institute or approve, — for example, measurements of height and weight, improvement or deterioration of physique, and the like.

10. He shall from time to time inspect the physical exercises given in the schools, and shall report to the board any practices that he considers injurious to individual pupils.

11. If any child is specially reported to him by the head teacher as suffering from any ailment or defect or injury, he shall as soon as possible examine the child and give such directions as may be necessary.

12. When required, he shall medically examine candidates appointed to positions under the board, junior students and intending junior students, and report in cases of employees absent owing to illness.

13. He shall, after such examination as he may find necessary, certify the fitness of teachers or pupils to undergo special courses of physical training.

14. He shall, by lecture, demonstration or otherwise, instruct the teachers in the methods of recognizing the common ailments and defects of school children; in the practice of first aid for school accidents; in the general hygiene of the school and class room, and in the physiological principles that underlie physical training.

15. He shall keep such records and books as the board may prescribe or approve; he shall submit an annual report on the work done, and he shall make such special reports as the board may require.

16. He shall perform any other medical duties that may be from time to time required by the board; but medical or surgical treatment shall be no part of the medical officer's duty.

*Adopted by the Board on 17th December, 1906.*

### EXAMINATION OF TEETH.

But one detailed report of the examination of the teeth has been received.

At the request of the school committee of Malden, the East Middlesex Dental Association examined the teeth of the school children, with the following results: —

Number of children examined, . . . . .	1,599
Number of children with teeth in good condition, . . . . .	321
Number of children with teeth in fair condition, . . . . .	764
Number of children with teeth in poor condition, . . . . .	502
Number of children owning a tooth brush, . . . . .	1,047
Number of children using a tooth brush at least once a day, . . . . .	697
Number of children who visit a dentist regularly for work other than extracting, . . . . .	261

## THE LONDON CONGRESS OF SCHOOL HYGIENE.

The Board of Education appointed its secretary as its representative at the Second International Congress of School Hygiene, held in London, Aug. 5-9, 1907.

Subsequently the secretary was appointed by His Excellency Governor Guild as a delegate to represent the State of Massachusetts, and he was one of several persons chosen to represent the American Association of School Hygiene.

The Congress held its sessions in the rooms of the Imperial Institute, at South Kensington. It was attended by 1,630 delegates, representing 30 countries and more than 300 educational authorities, national and municipal departments of education, universities and colleges, medical schools and hospitals, and voluntary associations.

The welcome by those who acted as hosts was cordial, and their hospitality abundant. The Marchioness of Londonderry acted as chairman of the ladies' reception committee, and Major-General Lord Cheylesmore as chairman of the general committee on reception and entertainment. Each of these was assisted by a number of gracious and accomplished men and women, to whom the delegates were under great obligation.

The Congress was under the patronage of King Edward, at whose request the Earl of Crewe, President of the Council, opened the general session with a sympathetic and interesting address.

The President of the Congress was Sir Lauder Brunton, a physician of distinction, and the various sections were presided over by men eminent as specialists.

In the organization the term "school hygiene" was given its broadest signification, as shown by the following subdivisions assigned for consideration to eleven sections holding meetings simultaneously: —

- I. "The Physiology and Psychology of Educational Methods and Work."
- II. "Medical and Hygienic Inspection in School."
- III. "The Hygiene of the Teaching Profession."
- IV. "Instruction in Hygiene for Teachers and Scholars."
- V. "Physical Education and Training in Personal Hygiene."

- VI. "Out-of-school Hygiene, Holiday Camps and Schools. The Relation of Home and the School."
- VII. "Contagious Diseases, Ill-health, and Other Conditions affecting Attendance."
- VIII. "Special Schools for Feeble-minded and Exceptional Children."
- IX. "Special Schools for Blind, Deaf and Dumb Children."
- X. "Hygiene of Residential Schools."
- XI. "The School Building and its Equipment."

In all, more than 250 papers were read. Among these were some of the pointless, inconsequential utterances of persons anxious to be seen and heard, which are inseparable from such occasions; but most of the papers were plain, straightforward stories of work begun or accomplished, or the carefully formed opinions of trained specialists.

As each delegate could hear but few of all the papers and discussions, no one can measure the actual contribution which the Congress made to the sum of knowledge of school hygiene until the proceedings have been published; but the Congress as a whole brought more clearly into view than ever before certain fundamental facts.

The Congress stood for the extension of public responsibility into a domain hitherto exclusively occupied by the home. Save in the single case of vaccination, the public has asked no question concerning the physical or mental soundness of the children whom the parents have sent to school; and save in the case of children stricken with some communicable disease, it has taken little notice of the physical or mental condition of the pupils as they have gone on through their school course. The quick and the slow, the strong and the weak, the sick and the well, the sound and the unsound, have been received on equal terms, grouped together in the same classes, subjected to the same conditions as to discipline and instruction, given the same work to do in the same time, tested as to their work and their progress by the same standards, and have received the same kind of rewards and punishments.

The assumption of equality as to capacity and capability has been persisted in, though the accumulated experiences of generations have proved its falsity. The result of this blind ad-



herence to an unsound and unbusiness-like policy has been an enormous waste of time and power and money.

Teachers have spent their energies in trying to accomplish the impossible. Lower classes have been clogged by children left behind, many of whom never got beyond the rudiments. They have left school without any adequate preparation for the work of the world, and handicapped by undiscovered or neglected physical defects. The presence of those incompetents has seriously impeded the progress of the more fortunate.

When the standards of school work were low, the weaker could attain them, and their deficiencies were not a serious impediment to themselves or others; but as the schools have been more closely graded, the courses of study made more comprehensive, the demands for greater intellectual effort made more insistent, the tests made more minute and severe, the ratio of backward pupils has steadily increased, until the condition has forced an inquiry into the cause.

Out of this inquiry has grown medical inspection in its various forms, and the results of such inspection have revealed such intimate relations between the physical conditions of the pupils and their school work as to warrant the public in assuming large responsibilities for the health and soundness of children.

The Congress also stood for an extension of the principle of specialization. So many grades of mental competency exist in any school system of considerable size that special classes are needed for the weaker pupils, with specially devised means and methods of instruction.

Special physical defects, too, may call for special classes or schools, as the schools for cripples and the ringworm and favus classes of London.

From the discussions at London it appeared that everywhere school hygiene is being considered under three aspects: —

There is, first, the *curative* work. The variety of diseases and defects under which children are suffering is great, and in large cities the cases easily amount up into the hundreds. Most of these are remediable; they only need prompt medical and surgical treatment.

Those acute contagious diseases which necessitate voluntary or compulsory withdrawal from school usually receive adequate attention. People have become accustomed to take them seriously, and for the protection of the family or the public to deal with them promptly.

But for the much larger number of diseases and defects which are not immediately alarming, from which fatal results are not likely to occur, but which disturb the physical balance and by becoming chronic produce permanent injury, no adequate means have yet been provided anywhere to compel the attention of parents.

The mere notification of parents that the children need attention has nowhere been found sufficient to ensure treatment. In some districts not more than 25 per cent. of the parents pay attention to the notices. In other places the hospitals and dispensary facilities have been so overtaxed as to interfere with the regular work. School clinics have been tried, with varying degrees of success.

The employment of school nurses appears to offer the most satisfactory solution of this most difficult problem. While the nurse is of great value in the school itself, by her ready detection and diagnosis of simple troubles and by her ability to apply immediately simple remedies, her chief value is in establishing communication with the home, and securing friendly co-operation with the parents. Parental neglect is rarely due to the absence of parental affection, but to ignorance. Familiarity with certain forms of disease makes them easily tolerable, and in households where the immediate necessities of life tax the thought and the effort of the parents the less pressing give way to the most pressing duties. Parental affection may be relied on when the mothers are taught how serious some of these defects may become, and are shown what they themselves can do to relieve them. This is the chief function of the school nurse; and the reports at the London Congress all went to show that where school nurses were employed the work of inspection bore the most immediate and satisfactory fruit.

Still more important as a part of the new hygiene is the *preventive* work. In its larger aspect this is a part of general public hygiene. Whatever is done in the way of better housing,

in securing more light and air, in better water supply, in regulation of the food supply, especially of milk; whatever in the opening of parks and gardens; whatever in the general regulations for the prevention of epidemics and to check the ravages of tuberculosis, — all these activities promote the health of the children and reduce the labors of the school physician.

But much remains to be done in the sanitation and care of school buildings and premises, and the inspection of the teachers themselves cannot safely be overlooked.

It was evident from the deliberations of the Congress that what may be called the *constructive* side of school hygiene is assuming larger relative importance everywhere.

To discover by inspection the presence of diseases and defects and to set in operation the proper remedial agencies is an imperative and immediate duty of the public everywhere.

To develop public hygiene and apply scientific principles to the construction and care of school buildings, to frame courses of study and to adapt methods of instruction which will make no excessive or unhygienic demands upon children and youth, — this preventive work is work of a higher order, and more fundamental in its character.

But positive efforts to build up sound bodies as a necessary basis for all intellectual and moral development are assuming more practical forms, and becoming more successful in interesting the public and securing public approval.

The narrow systems of school gymnastics and calisthenics are giving way to more varied forms of activity. Games and sports are coming to be recognized as educational instruments, having intellectual and moral as well as hygienic value. Swimming and dancing are finding a place in the curriculum of schools. Summer camps and excursions in increasing numbers are expressions of the wider thought.

The Congress was not unmindful of the pedagogical aspect of the effort to promote the public health through the schools. The necessity of including in the curricula of all schools systematic study of physiology and hygiene was insisted on. Instruction as to the conditions of personal and home hygiene was urged. As a condition of success in such teaching, it was pointed out that the study of hygiene in all its aspects must

form a part of the training of all teachers; and the Congress adopted a resolution presented by the American Association of School Hygiene, that hygiene should rank with the major studies in all normal schools and other institutions for the training of teachers.

The interest which the Congress has excited in the medical journals of the world and the widespread publicity given to its discussions are an assurance that the beneficent work which the Congress represented will be prosecuted with increasing vigor, and will be directed by increasing intelligence in all the civilized countries of the world.

#### THE NEW ENGLISH LAW.

Following the meeting of the Congress of School Hygiene, the English Parliament enacted a law regarding medical inspection which places England among the foremost nations in the effort to promote the national health by supervisory school measures. Of this law a leading English paper says: "It is the gift of a unanimous Parliament, representing, we hope, a unanimous nation, to the child life of the country."

The section of the Education Act of 1907 dealing with this subject reads as follows:—

13. (1) The powers and duties of a local education authority under Part III. of the Education Act, 1902, shall include: (a) Power to provide for children attending public elementary schools, vacation schools, vacation classes, play centres, etc. (b) The duty to provide for the medical inspection of children immediately before or at the time of or as soon as possible after their admission to a public elementary school, and on such other occasions as the Board of Education direct, and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools: *Provided*, that in any exercise of powers under this section the local education authority may encourage and assist the establishment or continuance of voluntary agencies, and associate with itself representatives of voluntary associations for the purpose.

(2) This section shall come into operation on the first day of January, nineteen hundred and eight.

In a comprehensive Memorandum issued Nov. 22, 1907, by the Board of Education, the following is the scope for the medi-

cal inspection. This is a minimum requirement, and “reasonable latitude” is allowed in adapting the examination to local and individual conditions:—

A consideration of these matters has led the Board to the conclusion that as far as practicable the statutory medical inspection should, at entrance or at subsequent inspection, take account of the following matters:—

- (1) Previous disease, including infectious diseases.
- (2) General condition and circumstances: (*a*) height and weight; (*b*) nutrition (good, medium, bad); (*c*) cleanliness (including vermin of head and body); (*d*) clothing (sufficiency, cleanliness and footgear).
- (3) Throat, nose and articulation (mouth-breathing, snoring, stammering, tonsillar and glandular conditions, adenoids).
- (4) External eye disease and vision testing.
- (5) Ear disease and deafness.
- (6) Teeth and oral sepsis.
- (7) Mental capacity (normal, backward, defective).
- (8) Present disease or defect: (*a*) deformities or paralyses; (*b*) rickets; (*c*) tuberculosis (glandular, pulmonary, osseous or other forms); (*d*) diseases of skin and lymph glands; (*e*) diseases of heart or lungs; (*f*) anæmia; (*g*) epilepsy; (*h*) chorea; (*i*) ruptures; (*j*) spinal disease; (*k*) any weakness or defect unfitting the child for ordinary school life or physical drill, or requiring either exemption from special branches of instruction or particular supervision.

The Board prescribes that not less than three inspections shall be made during the school life of the child:—

The first inspection should take place at the time of, or as soon as possible after admission to school; the second at or about the third year (say, the seventh year of age); and the third at or about the sixth year of school life (say, the tenth year of age). A further inspection immediately before the departure of the child into working life would be desirable where practicable, and in some areas it may be best for this to take the place of the third inspection.

To avoid misunderstanding, the Board recommends as follows:—

The Board of Education recommend that each local education authority should encourage one or both of the parents of the child to be present at the first inspection, and to this end a notification should be sent to the parents as to the time and place at which it will take place. Whilst some trouble may be involved in inviting the parents, the Board

believe that substantial gains would thus be secured, for by this means misunderstandings will be avoided and prejudice will be disarmed. Moreover, the parent is able to facilitate examination and provide information, and the medical inspector's opinion could be given clearly and directly to the persons most nearly concerned.

The Memorandum deals with the relations of the school and the home in the matter of health in such a broad and suggestive way as to make its statements valuable for any community. Under the head of "Subsidiary Agencies" are the following words:—

The Board are convinced that the work of medical inspection cannot be properly accomplished by medical men without assistance. The teacher, the school nurse (where such exists) and the parents or guardians of the child must heartily co-operate with the school medical officer. In whatever way the system be organized, its success will depend, immediately and ultimately, upon the cordial sympathy and assistance of the teachers. Some authorities will find that the teachers are able to undertake, without undue strain, a share of the work of furnishing data respecting each child, and even perhaps to carry out some portion of the inspection; and it is clear that the successful application of the principles of hygiene to school life will depend almost entirely upon their efforts. What the mother is in the home, the teacher is in the school. Experience shows that when the teachers understand the necessities and opportunities of the situation they are both willing and able to take their share. Their co-operation in the work already done in this direction has been beyond praise. The school nurse and health visitor are also important agents in school hygiene. They may serve as links between the school and the home, and can assist in recording the results of inspection, in securing and maintaining personal cleanliness, and in carrying out medical advice concerning simple complaints. They are also able to give counsel in the home, to visit the children at home or in the school, and in many other ways to advance the cause of school hygiene. The Board are satisfied that this work offers a great deal of valuable service for the school nurse, and they recommend that wherever practicable, education authorities should secure, especially in rural districts, the benefit and true economy which may thus be obtained. It is essential, however, that the teacher, school nurse or health visitor assisting in the administration of this act should act strictly under the instruction and supervision of medical authority. Nor must the influence which the parent can exercise by example and precept be neglected. One of the objects of the new legislation is to stimulate a sense of duty in matters affecting health in the homes of the people, to enlist the best services and interest of

the parents, and to educate their sense of responsibility for the personal hygiene of their children. The increased work undertaken by the State for the individual will mean that the parents have not to do less for themselves and their children, but more. It is in the home, in fact, that both the seed and the fruit of public health are to be found. All-round co-operation between school medical officer, teacher, nurse, health visitor and parent will prove both effective and economical; and the full utility of the act will not be secured unless, in advising local education authorities, the medical officer pays careful attention to considerations of expenditure and to the relative urgency of the reforms he proposes to undertake.

And the following statement as to the "Character and Degree of Medical Inspection" might well be printed in the report of every school superintendent in Massachusetts:—

From what has been said it will be clear that the fundamental principle of section 13 of the new act is the medical examination and supervision not only of children known, or suspected, to be weakly or ailing, but of all children in the elementary schools, with a view to adapting and modifying the system of education to the needs and capacities of the child, securing the early detection of unsuspected defects, checking incipient maladies at their onset, and furnishing the facts which will guide education authorities in relation to physical and mental development during school life. It is evident that—although this work involves (a) medical inspection of school children at regular intervals, (b) the oversight of the sanitation of the school buildings, and (c) the prevention, as far as may be, of the spread of infectious and contagious diseases, including skin diseases—action in these three directions will be incomplete unless (d) the personal and home life of the child are also brought under systematic supervision. The home is the point at which health must be controlled ultimately.

The character and degree of medical inspection will depend on the standpoint from which the subject is viewed, the difficulty being of course to attain a due sense of proportion and uniformity, particularly as to fundamental points. Valuable to science though the findings of a more thorough and elaborate medical examination might be, it is the broad, simple necessities of a healthy life which must be kept in view. It cannot be doubted that a large proportion of the common diseases and physical unfitness in this country can be substantially diminished by effective public health administration, combined with the teaching of hygiene, and a realization by teachers, parents and children of its vital importance. The spread of communicable diseases must be checked; children's heads and bodies must be kept clean; the commoner and more obvious physical defects, at least, must be relieved,

remedied or prevented; schoolrooms must be maintained in cleanly condition, and they must be properly lighted, well ventilated, and not overcrowded; the training of the mental faculties must not be divorced from physical culture and personal hygiene. It is these primary requirements which must first receive attention.

#### SCHOOL HYGIENE IN GERMANY.

A most informing monograph, entitled "School Doctors in Germany," by W. H. Dawson, has been published by the Board of Education of the British government as Educational Pamphlet No. 4. The statements which follow have been taken from this pamphlet.

Medical inspection has developed into medical supervision almost everywhere in Germany. It is customary for the school physician to examine thoroughly every child seeking admission to the school, to see if he is in proper physical and mental condition to be subjected to the school régime, and whether, if admitted, he needs special oversight or special methods of instruction. This examination takes place as early as possible after the child reaches school age. If the doctor finds the child unfit for school work, entrance must be delayed for a half year or a year, when the child is re-examined.

Many children are admitted and placed under special oversight, and some assigned to special schools. The examination is made with the consent of the parents, and frequently in the presence of the parents. If parents object to the examination by the school doctor, they must furnish a certificate in a prescribed form giving results of an equivalent examination made by the family doctor.

During the first year (1902-03) of the employment of school doctors in Berlin, 12.3 per cent. of all the children notified for primary admission had to be put back for varying terms. In 26 per cent. of the cases the reason was general physical weakness; in 16 per cent. it was recent serious illness; in 16 per cent. delicate constitution (rickets, scrofula and anæmia); in 10 per cent. insufficient development; in 5 per cent. tuberculosis of the lungs; and other causes were weakness of the heart, epilepsy, nervous maladies, skin diseases and defective articulation.

In 1904-05 the number of newly-registered children in Berlin was



34,562 . . . and of these 2,927 were put back and 7,041 were placed under oversight.

In Wiesbaden in 1904-05 the general constitution of the children newly admitted to the elementary schools was "good" (meaning in perfect health) in only 41.2 per cent. of the cases, "medium" in 54.4 per cent., and "bad" in 4.4 per cent. Of 1,043 children presented for examination, 549, or 52.6 per cent., were found to be suffering from 813 maladies.

In Wiesbaden, where the system has been most fully developed, all children are re-examined in the third, fifth and eighth school year, comparison being made with the primary examination results.

As to the importance and value of these medical examinations in general, opinion is unanimous and emphatic. Again and again it happens in the experience of most school authorities which have adopted the institution that weaknesses are brought to light of which both teachers and parents have been ignorant, yet which have a deterrent influence upon the children's education, and which if neglected would probably disable them in after life.

Supervision finds its difficulties in the neglect of parents in Germany, as in America. But some favorable reports are made. In Leipzig it was found that in 75 per cent. of the cases in which advice was given to parents remedial measures were at once taken; on a supplementary examination, the majority of the remaining parents followed the advice given; and in less than 4 per cent. were the efforts of the school doctor fruitless.

Most school authorities are very strict in imposing the utmost possible privacy in the making of examinations and secrecy in guarding the results.

Most towns are at pains to consult the feelings and to disarm the prejudices of parents to the utmost, and to encourage the fullest confidence in the school doctors.

Care is taken to explain to the parents that the examination of their children is solely for their welfare, and that the purpose of the school authority is entirely disinterested.

It has been found also that one of the best ways of securing the confidence of the parents is by inviting them to be present at the examination of their children. A common form of notification runs as follows:—

— — — School.

The examination of your child by the school doctor will take place at on at o'clock. *The presence of the mother or father is desired.*

There will be no examination should the parents or guardians so prefer, and at the same time cause the special health certificate to be filled up by their own doctor.

(Date) , 190 . (Signed) — — —, *Head Master.*

Not only has the invitation to parents to attend been found of great service in disarming prejudice and opposition, and so facilitating the introduction of systematic examination, but it removes the natural apprehension and shyness of the children; for, though the head master is always present at the examination of the boys, and a female teacher at the examination of the girls, the mother's presence causes a child to feel greater confidence under the doctor's eye.

There is the further advantage that by questioning the parents the doctor can obtain information which greatly helps him in his diagnosis and in prescribing the attention which may be needed, while explicit verbal instructions notoriously convey greater urgency than the most carefully written admonitions.

So much importance is attached to the information obtained from guardians that in many towns a list of questions regarding the general condition, the maladies passed through, and the existing weaknesses, is sent to the parents of every child notified for admission to school, and its return is required before or when the child makes its first attendance. The information so given is found to be an invaluable help in the later examination by the school doctor.

The effort of the school authorities to obtain the co-operation and support of the parents and the public is clearly shown in the following notice: —

*1. Notice to Parents, explaining the Practice and Purpose of Medical Examination (Wiesbaden).*

For the better protection of the health of the children of the citizens of Wiesbaden attending the public schools, the municipal authorities have decided to engage school doctors, to whom are entrusted the medical examination of the children after their admission to school, the regular supervision of their health so long as they remain at school, and the inspection of the school premises from the hygienic standpoint.

This institution will be of considerable advantage both to the scholars and their families. It will be possible to pay greater attention than heretofore to the physical constitution and the health of the individual child in the imparting of instruction, and the parents will be helped,

by the observations of the school doctors which are brought to their knowledge, in their endeavors to preserve their children in good health.

Parents who do not wish their children to be examined by the school doctor (the medical treatment of the children does not fall to the school doctor's official functions) must furnish the required health report in the form of a certificate from their family doctor.

Forms for such medical certificates may be obtained free of charge from the porters' room at the town hall, and of the school curators.

### THE ULTIMATE DEMANDS OF SCHOOL HYGIENE.

The movement now in progress, which has reached different stages in different countries, seems to be shaping itself so as to include as necessary features the following elements:—

1. *Physicians.* — A sufficient number of trained physicians to carry on the necessary examinations and exercise the needed oversight of all the children in the public and private schools, these physicians to act under the direction of the local educational authority, but in co-operation with the local health authorities. In the larger cities the physicians should act under the immediate direction of a chief medical officer, who should be a permanent member of the educational staff.

2. *Nurses.* — A sufficient number of trained nurses to establish and maintain mutually helpful relations between the schools and the homes. The teachers, the nurses, the school doctors and the parents are all needed for an effective system of school hygiene. This is not now merely a theory, but has been demonstrated so widely under such different social conditions as to have all the weight of a scientific fact.

3. *Examinations.* — Examinations of all school children as to their physical condition in relation to school work at fixed periods, the first and most important being at the time of admission to school. The results of this examination will determine the amount and kind of oversight which the child will need as he goes on in his school work, and the sort of régime to which he may safely be subjected.

Just at what periods subsequent examinations should be made is now a question under discussion, and various experiments are being made, but probably they will not need to be annual, as now required by the Massachusetts law.

4. *School Clinics.* — The most serious obstacle to the suc-

cessful operation of a system of medical inspection is the failure of parents to provide the treatment which school inspection has shown to be necessary. This is due partly to indifference and partly to poverty.

To overcome this difficulty, several of the Swiss cities have established school clinics or centers where without cost to the parent examinations may be made and treatment provided. Some of these centers are for the treatment of the teeth only; others are for any of the diseases or defects from which the child is suffering.

It seems probable that in the near future similar provision will need to be made in all cities of considerable size. Already the need of such provision has been demonstrated in many cities and towns in Massachusetts, and if such clinics were established in the large centers they could be used for the benefit of the smaller contiguous places, which now offer no facilities either for satisfactory examination or for treatment.

5. *Special Classes.* — The results of medical examinations, wherever carried on in a school system of any considerable size, show that there are some children who cannot safely be left to associate with well children, and who need special classes carried on under special conditions. Such are the ringworm and favus schools of London.

There are other children whose constitution will not endure the confinement of the ordinary class room and the hours of the ordinary class day, who need specially planned buildings and special hours for work. They must have more fresh air than will suffice for most children.

There are still other children whose mentality is low, who need more slow and patient treatment than the majority of children. School classification will need to take other elements into consideration than age and scholastic attainments.

6. *Sanitation of Buildings.* — While great improvements have been made in schoolhouse sanitation in recent years, there remains much to be done. There are still in Massachusetts schoolhouses in which every hygienic principle is violated, and the first step in the promotion of school hygiene in many communities is to furnish decent accommodations.

In lighting, heating and ventilation, in provisions for drink-

ing and washing and in the sanitary conveniences there is still a vast amount of work to be done.

Some recent experiments made in Chicago seem to show that the differences in the light received in schoolrooms at different hours of the day and at different seasons of the year and in different parts of the room are great enough to call for a modification of the school work in the interest of the eyesight of the children. The results of these experiments are given in the "Popular Science Monthly" for October, 1907.

7. *Physical Culture.* — In order that medical inspection in the future may find in the schools fewer victims of disease, it is seen to be necessary to take active measures to build up constitutions sound enough to resist the attacks of disease and to endure the strain of the long process of school training.

Physical culture, including not only in-school gymnastic exercises but out-of-door training in formal exercises, in supervised games and in athletic sports, is fast making for itself a place among the school activities of progressive communities, and will apparently in the future be reckoned as an essential part of school hygiene.

8. *Playgrounds and Camps.* — The cities everywhere are waking up to the fact that growing children need an abundance of air and exercise, and that these are the very things which city conditions do not afford. Boston has taken a long step forward and has set an example to all the cities in placing its playgrounds under the care of the school authorities, thus recognizing play as a legitimate and necessary feature in the promotion of school hygiene. The way is opening to utilize the vacation seasons for recuperation and for the storing up of energy in camps by the shore and in the country, and the promise is that this means of education is to become more general in the future.

9. *The Training of Teachers.* — The fact has been made apparent by all the recent experience the world over that, in matters of health as in the processes of instruction, in the last analysis the teacher holds the key to the situation.

The schoolhouses may be constructed ever so perfectly, the physicians and nurses may do their work in inspection and diagnosis and treatment ever so skillfully, the school program

may make the most elaborate provision for physical training; but, unless the teacher knows the human body and the conditions of health and how to secure them, and takes as much interest in helping her children to be well and to keep well as she does in helping them in their scholastic work, unless she comes to feel as much responsibility for one as for the other, school hygiene will languish and prove ineffective.

The normal schools and all other institutions for training teachers will need to place much more emphasis than they have been doing upon this side of professional training. Whatever else they do or do not do, this cannot safely be neglected.

### TEACHERS' INSTITUTES.

The statistics of the regular institutes for 1907 are as follows:—

WHERE HELD.	Date.	Number of towns represented.	Number of members.	Number of exercises.	By whom conducted.
Ayer, <sup>1</sup> . . . .	Nov. 1,	12	127	10	J. W. MacDonald.
Belchertown, . . .	May 17,	6	61	12	J. E. Warren.
Bourne, . . . .	Oct. 23,	7	97	13	John T. Prince.
Charlemont, . . .	May 14,	9	78	14	J. E. Warren.
Deerfield, . . . .	May 15,	11	148	14	J. E. Warren.
Gardner, . . . .	Oct. 12,	11	161	17	J. W. MacDonald.
Great Barrington, . .	April 26,	11	137	14	J. E. Warren.
Hinsdale, . . . .	April 25,	13	102	14	J. E. Warren.
Hopedale, . . . .	April 30,	11	247	15	J. W. MacDonald.
Lexington, . . . .	March 15,	8	192	14	J. W. MacDonald.
Marion, . . . .	May 8,	9	144	14	John T. Prince.
Marlborough, . . . .	May 1,	9	220	14	John T. Prince.
Millis, . . . .	May 6,	8	98	14	John T. Prince.
Monson, . . . .	April 24,	12	138	14	J. E. Warren.
Orleans, . . . .	Oct. 22,	9	73	13	John T. Prince.
Spencer, . . . .	May 3,	9	156	14	J. W. MacDonald.
Tisbury, . . . .	Sept. 27,	5	30	11	John T. Prince.
Wakefield, . . . .	March 13,	7	185	14	J. W. MacDonald.
Webster, . . . .	Oct. 9,	9	192	17	J. W. MacDonald.
Williamsburg, . . . .	May 16,	7	56	11	J. E. Warren.
Totals (20), . . . .		183	2,642	273	

<sup>1</sup> United with the Northwest Middlesex County Teachers' Association meeting.

General addresses have been given as follows:—

- What the Public School has a Right to expect from the Public, What the Public has a Right to expect from the Public School,—by Mr. Charles S. Chapin, principal, State Normal School, Providence, R. I.
- Medical Inspection of the Public Schools, Some Modern View-Points in Education, The Transient and Permanent in Education,—by Mr. George H. Martin, secretary, State Board of Education.
- The Vital Element in Education,—by Mr. Wilbur F. Gordy, superintendent of schools, Springfield.
- The Power of Our Expectation,—by Mr. William C. Bates, superintendent of schools, Cambridge.
- The Industrial Movement in Education,—by Mr. Frank F. Murdock, principal, State Normal School, North Adams.
- Attracting and Studying Birds, What Nature Study can do for Birds,—by Dr. Jean Dawson, Clark University, Worcester.
- The Teaching of Agriculture in the Public Schools,—by Prof. F. A. Waugh, Massachusetts Agricultural College, Amherst.
- The School Garden,—by Mr. Clarence M. Weed, Lowell.
- Rural Progress,—by President Kenyon L. Butterfield, Massachusetts Agricultural College, Amherst.
- Some of the Aims of a Commercial Course, Can High School Instruction be made more Practical, Do High Schools need more of the Practical in their Methods of Teaching, The Lack of Ability to Visualize among Grammar and High School Pupils,—by Mr. J. W. MacDonald, agent of the Board, Stoneham.
- Personal Element in High School Management,—by Mr. J. E. Warren, agent of the Board, Worcester.
- How to meet the Needs of the Individual Pupil,—by Mr. Robert O. Small, superintendent of schools, Grafton.
- The Individual Pupil,—his Place in School,—by Mr. Clarence M. Weed, instructor in nature study, State Normal School, Lowell.
- How to meet the Needs of Individual Pupils,—by Mr. John T. Prince.
- Primary School Management,—by Miss Bertha M. McConkey, supervisor of primary schools, Springfield.
- Essentials in the Teaching of Music in the Public Schools,—by Mr. Leonard B. Marshall, assistant director of music, Boston.
- Lessons from European Schools,—by Mr. Will S. Monroe, instructor, psychology, etc., Westfield State Normal School.
- Whittier,—the Poet of New England (illustrated),—by Mr. George N. Cross, Haverhill.
- Educational Ideas and Methods among the Jews at the Beginning of the Christian Era,—by O. C. S. Wallace, D.D., Lowell.
- Education for Power and Efficiency,—by J. M. Tyler, professor of biology at Amherst College, Amherst.

Lessons have been given in different subjects as follows: —

Language and reading: —

Mr. F. G. Atwell, Baldwinville.  
Miss Mabel C. Bragg, Lowell.  
Miss Katherine T. Bryce, Newton.  
Mr. J. H. Carfrey, Wakefield.  
Miss Clara E. Craig, Providence, R. I.  
Mr. B. C. Gregory, Chelsea.  
Miss Bertha M. McConkey, Springfield.  
Miss May C. Melzard, Newton.  
Mr. W. D. Parkinson, Waltham.  
Mr. Herbert F. Taylor, Hopedale.  
Mr. Albert P. Walker, Boston.  
Mr. J. E. Warren, Worcester.

Arithmetic: —

Mr. Albert L. Barbour, Natick.  
Miss Gertrude E. Bigelow, Boston.  
Miss Anna W. Braley, Fall River.  
Mr. J. H. Carfrey, Wakefield.  
Mr. Charles S. Chapin, Providence, R. I.  
Mr. G. T. Fletcher, Portsmouth, N. H.  
Mr. John C. Gray, Chicopee.  
Mr. John T. Prince, West Newton.  
Mr. J. E. Warren, Worcester.

Geography: —

Mr. C. S. Lyman, Hudson.  
Mr. Will S. Monroe, Westfield.  
Miss Lillian A. Ordway, Framingham.  
Mr. John T. Prince, West Newton.  
Mr. Charles P. Sinnott, Bridgewater.

History: —

Mr. Arthur C. Boyden, Bridgewater.  
Miss Mabel Hill, Lowell.  
Mr. Albert P. Walker, Boston.

English: —

Miss Mabel C. Bragg, Lowell.  
Mr. B. C. Gregory, Chelsea.  
Mr. Wallace E. Mason, North Andover.  
Mr. John T. Prince, West Newton.  
Mr. Herbert F. Taylor, Hopedale.  
Mr. Albert P. Walker, Boston.  
Mr. Alfred M. Hitchcock, Hartford, Conn.



## Drawing: —

Mr. Frederic L. Burnham, Cambridge.

## Writing: —

Mr. William E. Riley, Hinsdale.

## Nature study: —

Miss Abby P. Churchill, Fitchburg.

Mr. Charles P. Sinnott, Bridgewater.

## Elementary science: —

Mr. J. W. MacDonald, Stoneham.

Mr. Frank F. Murdock, North Adams.

## Latin: —

Mr. J. W. MacDonald, Stoneham.

## French: —

Mr. W. B. Snow, Boston.

## Geometry: —

Mr. C. L. Randall, Barre.

## Mathematics: —

Mr. J. W. MacDonald, Stoneham.

Mr. Wallace E. Mason, North Andover.

## Physics: —

Mr. J. W. MacDonald, Stoneham.

Mr. J. C. Packard, Brookline.

## Literature: —

Mr. Charles S. Chapin, Providence, R. I.

Mr. J. W. MacDonald, Stoneham.

Mr. Albert Perry Walker, Boston.

## Story-telling: —

Miss Mabel C. Bragg, Lowell.

## Educational desk work: —

Miss May C. Melzard, Newton.

## Self-activity: —

Mr. John T. Prince, West Newton.

Conferences were held in connection with several institutes as follows: —

Conducted by Mr. C. H. Howe, principal, high school, Wake-

field: "The quick and the slow pupil; how may class work be adapted to the needs of each? Does the quick pupil lose by association with the slow one? Has he a right to expect more? If so, what?"

Conducted by Mr. F. L. Boyden, principal, Deerfield Academy, Deerfield: "The personal element in high school management."

Conducted by Mr. James W. MacDonald, agent of the Board: At Wakefield, — "Can better results in English be secured?" At Gardner and Webster, — "For the time and effort expended on ancient and modern languages, can or should greater results be secured? If so, how?" At Lexington and Hopedale, — "How can results in English be improved and time economized?" Mr. MacDonald also conducted conferences at the Hinsdale and Charlemont institutes.

Conducted by Mr. John T. Prince, agent of the Board: conference on English, at Spencer.

Conducted by Mr. Frederic L. Burnham, agent of the Board for the promotion of manual arts: at Gardner and Webster, — "How can drawing be made more practical?"

An evening session was held in connection with the Charlemont institute, at which the general address was given by Mr. Martin, on "Some modern view-points in education."

#### INDUSTRIAL EDUCATION INSTITUTE.

Under the direction of the secretary of the Board, Mr. Frederic L. Burnham held an institute Dec. 13, 1907, in the State Normal Art School, Boston, on industrial education, to which were invited the Alumni Association of the Massachusetts Normal Art School, superintendents of schools, supervisors and teachers of drawing and manual training. The program is given in full, as follows: —

##### *Morning Session.*

- 9.30. Industrial Education in Massachusetts, — Charles H. Morse, secretary, Commission on Industrial Education.
- 10.00. The Business Man's Point of View, — James P. Munroe, Munroe Felt and Paper Company, Boston.

- 10.30. Industrial Education in the Massachusetts Normal Art School,  
— George H. Bartlett, principal, State Normal Art School.  
11.00. What can the Public Schools do to improve Industrial Condi-  
tions, — Julius E. Warren, agent of the State Board of  
Education.

*Afternoon Session.*

- 2.00. What Two Normal Schools are doing, — Charles H. Morrill,  
Hyannis State Normal School.  
2.30. Willis B. Anthony, North Adams State Normal School.  
3.00. An Interesting Experiment with Grammar School Pupils, —  
Walter Sargent, Supervisor of Drawing and Manual Train-  
ing, Boston Public Schools.  
3.30. Frank P. Leavitt, assistant supervisor of drawing and manual  
training, Boston public schools.

MUSIC INSTITUTE.

The supervisors of music in Massachusetts were invited by the State Board of Education to an institute held in the Common Council Chamber, City Hall, Worcester, Mass., Friday, April 26, 1907. The program was as follows: —

- 10.00 A.M. The Aim of Instruction in Music in the Public Schools, —  
Frank Damrosch, Mus. Doc., New York.  
Discussion led by Charles I. Rice, supervisor of music,  
Worcester; F. W. Archibald, instructor of music in the  
Salem and Framingham State normal schools; Frederic  
H. Ripley, master, Longfellow school, Boston.  
11.30 A.M. Music in Rural Schools, — Miss Mildred S. Jones, super-  
visor of music, Northborough.

*Intermission.*

- 1.30 P.M. Improvement in High School Music, — Leonard B. Mar-  
shall, assistant director of music, Boston.  
2.45 P.M. The Contribution of Public School Music to the Social  
Life of the Community, — Osbourne McConathy, super-  
visor of music, Chelsea.

GEORGE H. MARTIN,  
*Secretary of the Board.*

EVENING SCHOOLS.

For details of evening school attendance, number of teachers, expenditures, etc., reference should be made to page xevii of the abstract of the school returns.

The following table shows what is being done in the State to furnish instruction beyond the elements in evening schools:—

CITIES AND TOWNS.	High.	Drawing.	Technical.	CITIES AND TOWNS.	High.	Drawing.	Technical.
Adams, . . .	—	—	—	Medford, . . .	1	1	—
Attleborough, . . .	—	—	—	Milford, . . .	—	—	—
Beverly, . . .	2	3	1	Millbury, . . .	—	—	—
Boston, . . .	5	6	—	New Bedford, . . .	—	—	—
Brockton, . . .	1	2	—	Newburyport, . . .	—	—	—
Brookline, . . .	—	1	2	Newton, . . .	—	1	—
Cambridge, . . .	1	2	1	North Adams, . . .	—	1	—
Chelsea, . . .	1	—	—	Northampton, . . .	—	1	—
Chicopee, . . .	—	1	—	North Attleborough, . . .	—	—	—
Clinton, . . .	—	1	—	Northbridge, . . .	—	—	—
Dudley, . . .	—	—	—	Oxford, . . .	—	—	—
Easthampton, . . .	—	—	—	Peabody, . . .	—	—	—
Everett, . . .	—	1	2	Pittsfield, . . .	2	2	—
Fall River, . . .	2	2	—	Plymouth, . . .	—	—	—
Fitchburg, . . .	—	—	—	Quincy, . . .	—	1	—
Framingham, . . .	—	—	—	Salem, . . .	—	1	—
Gardner, . . .	—	—	—	Somerville, . . .	1	—	—
Gloucester, . . .	—	—	—	Southbridge, . . .	—	—	—
Greenfield, . . .	—	—	—	Spencer, . . .	—	—	—
Hatfield, . . .	—	—	—	Springfield, . . .	1	1	1
Haverhill, . . .	—	1	1	Sutton, . . .	—	—	—
Holyoke, . . .	1	—	1	Taunton, . . .	—	3	—
Hyde Park, . . .	—	1	1	Wakefield, . . .	—	—	—
Lawrence, . . .	1	1	—	Waltham, . . .	—	1	1
Leominster, . . .	—	—	—	Watertown, . . .	—	—	—
Lowell, . . .	1	4	—	Webster, . . .	—	—	—
Lynn, . . .	—	2	—	Westfield, . . .	—	—	—
Malden, . . .	—	1	—	Woburn, . . .	—	1	2
Marlborough, . . .	—	—	—	Worcester, . . .	1	3	1
Maynard, . . .	—	—	—	Totals, . . .	21	46	14

## KINDERGARTENS.

*Table showing the number and location of public kindergartens kept during the school year ending in June, 1906, and cost of their maintenance.*

CITIES AND TOWNS.	Number of public kindergartens.	Number of teachers.	Number of different pupils.	Minimum age at which pupils are admitted.		Cost.
				Yrs.	Mos.	
Andover, . . .	3	3	107	4	—	\$2,069 50
Attleborough, . . .	2	3	107	4	—	1,612 61
Boston, . . . .	107	200	7,279	3	6	154,840 68
Braintree, . . .	5	5	162	4	—	1,803 92
Bridgewater, . . .	1	2	37	3	6	1,500 00
Brookline, . . .	11	21	481	3	6	15,649 21
Cambridge, . . .	16	31	954	3	6	20,326 42
Chelsea, . . . .	2	2	102	5	—	1,084 75
Chicopee, . . . .	2	2	51	3	—	1,010 00
Dedham, . . . .	4	8	169	3	6	2,946 87
Easton, <sup>1</sup> . . . .	1	2	56	3	—	725 00
Fall River, . . .	3	6	227	3	—	2,817 97
Falmouth, . . .	1	1	28	3	6	500 00
Framingham, . . .	2	4	63	4	—	1,725 00
Greenfield, . . .	2	2	72	4	—	750 00
Haverhill, . . .	12	10	551	3	10	5,400 00
Holyoke, . . . .	8	16	526	4	6	7,861 45
Hopedale, <sup>2</sup> . . .	1	1	23	4	—	1,025 67
Lee, <sup>3</sup> . . . . .	1	2	42	3	—	966 00
Leicester, . . .	1	1	39	5	—	401 00
Lowell, . . . .	13	25	724	3	6	15,614 00
Marblehead, . . .	2	4	101	4	—	1,300 00
Medford, . . . .	6	5	245	4	6	3,400 00
Milton, . . . .	4	7	177	3	6	4,800 00
New Bedford, . . .	3	6	194	4	—	3,975 34

<sup>1</sup> Supported by income of Oakes Ames fund.

<sup>2</sup> Also one teacher on part time.

<sup>3</sup> Partly supported by private individuals.

*Number and location of public kindergartens, etc. — Concluded.*

CITIES AND TOWNS.	Number of public kindergartens.	Number of teachers.	Number of different pupils.	Minimum age at which pupils are admitted.		Cost.
				Yrs.	Mos.	
Newton, . . . .	14	27	732	4	—	\$16,543 00
North Adams, . .	5	9	292	4	—	3,675 00
Northampton, . .	6	7	186	4	—	4,098 14
Pittsfield, . . .	2	4	134	4	—	2,490 94
Salem, . . . . .	5	10	282	4	—	5,255 00
Somerville, . . .	4	8	419	4	—	3,788 55
Springfield, . . .	14	26	1,083	4	—	15,662 87
Sutton, . . . . .	1	2	104	5	—	459 00
Wellesley, . . . .	1	2	21	—	—	600 00
Westfield, . . . .	4	8	129	4	10	2,000 00
West Springfield, .	3	2	141	4	10	1,377 00
Winchester, . . .	2	4	94	4	—	1,565 00
Worcester, . . . .	23	34	1,162	4	—	22,318 93
Totals, . . . . .	297	512	17,296	3 to 5 yrs.		\$333,938 32

## VACATION SCHOOLS.

In 1906 there were 38 schools supported at public expense, in 14 towns and cities, as shown by the following table: —

CITIES AND TOWNS.	NUMBER OF —			Average length of schooling.	Total expenditure for support of schools.
	Schools.	Teachers.	Pupils.		
				Mos. Days.	
Athol, . . . . .	1	5	61	— 15	\$45 00
Attleborough, . .	2	4	90	1 15	255 24
Boston, . . . . .	10	157	13,676	1 —	7,728 57
Brookline, . . . .	3	12	632	1 10	1,997 81
Cambridge, . . . .	5	29	1,212	1 5	1,801 27
Haverhill, . . . .	3	30	1,301	1 5	785 15
Lawrence, . . . . .	5	20	990	1 —	436 35
Manchester, . . . .	2	2	40	1 5	96 40

CITIES AND TOWNS.	NUMBER OF—			Average length of schooling.		Total expenditure for support of schools.
	Schools.	Teachers.	Pupils.	Mos.	Days.	
Maynard, . . . .	1	1	65	1	10	30 00
Medford, . . . .	1	5	169	1	10	200 70
Milford, . . . .	1	3	127	1	10	150 00
Newton, . . . .	1	4	336	1	10	865 20
Winchendon, . .	2	2	31	1	—	64 00
Worcester, . . .	1	5	304	1	5	200 00
Totals, . . . .	38	279	19,034	1	4	\$14,655 69

#### STATE AID FOR HIGH SCHOOLS.

Towns containing 500 families are required to maintain high schools. Other towns may maintain such schools, and on certain conditions may receive State aid to the amount of \$500.

The following 40 towns, having complied with the conditions, were entitled to receive the \$500 grant in 1907. Twenty-six towns received the grant in 1903, 34 in 1904, 36 in 1905, and 37 in 1906. The towns added to the list this year are Medford, Petersham and Stow.

Ashby,	Littleton,	Sharon,
Ashfield,	Lunenburg.	Sheffield,
Ashland,	Medfield,	Shelburne,
Avon,	Mendon,	Shrewsbury,
Bernardston,	Millis,	Southborough,
Bolton,	New Salem,	Stow,
Charlton,	Northborough,	Sudbury,
Chester,	Northfield,	Tisbury,
Conway,	Norwell,	West Boylston,
Edgartown,	Orleans,	West Newbury,
Essex,	Petersham,	Wilmington,
Granby,	Plainville,	Wrentham.
Hadley,	Rutland,	
Huntington,	Sandwich,	

#### REIMBURSEMENT FOR HIGH SCHOOL TUITION.

Towns not required by law to maintain a high school must make provision for high school instruction in other towns.

Under certain conditions they may be reimbursed by the State for the whole or for one half of the cost of such instruction.

Under the provisions of the law, 97 towns sending 1,061 pupils were reimbursed wholly or in part by the State. The number of towns is 3 smaller and the number of pupils 16 less than last year. The amount contributed by the State for their tuition was \$36,613.94. The total obligation of the State for high school aid was \$56,613.94.

Twenty-four towns having a valuation per pupil in excess of the State average (\$7,334) were not reimbursed. Twenty towns did not avail themselves of the law. Ten of these maintain a high school without State aid, or have the benefit of a local academy. Only 11 towns have no pupils in the high school. These towns contain 712 children, between the ages of five and fifteen.

Although the purpose of the law was to equalize opportunities throughout the State, the tables show that is far from being accomplished. The rates paid for tuition vary from \$20 at Bernardston to \$79.30 in New Bedford. The average rate of tuition is \$42.07.

That the difference in rate represents fairly the difference in the value of the instruction furnished must be doubted. Some of the charges are certainly too high for the advantages offered, and the Board of Education will be compelled in the near future to bring about some readjustment of these rates.

*Table showing high school tuition reimbursements under section 3, chapter 42, Revised Laws, as amended by chapter 433, Acts of 1902.*

<sup>For</sup> [NOTE. — Towns the names of which are italicized were reimbursed by the State for half tuition expenditures only.]

TOWNS.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
Acushnet, . . .	14	Fairhaven, . . .	\$75 00	\$982 50
“ . . .	1	New Bedford, . . .	79 30	79 30
Alford, . . .	4	Great Barrington (Searles), .	54 00	216 00
<i>Auburn</i> , . . .	15	Worcester (English), . . .	60 00	405 00



*High school tuition reimbursements, etc. — Continued.*

Towns.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
Auburn, . . .	1	Worcester (Classical), .	\$60 00	\$30 00
Becket, . . .	13	Chester, . . . . .	60 00	655 50
“ . . . .	1	Springfield (Central), .	75 00	75 00
“ . . . .	1	Springfield (Technical), <sup>1</sup> .	75 00	75 00
“ . . . .	3	Westfield, . . . . .	50 00	150 00
“ . . . .	1	Pittsfield, . . . . .	36 00	36 00
“ . . . .	1	Lee, . . . . .	50 00	50 00
Bedford, . . .	46	Concord, . . . . .	48 00	1,080 00
Bellingham, . .	2	Milford, . . . . .	38 00	38 00
“ . . . .	22	Franklin, . . . . .	29 25	268 88
Berkley, . . .	2	Fall River, . . . . .	60 00	90 00
“ . . . .	3	Taunton, . . . . .	50 00	150 00
Berlin, . . . .	15	Clinton, . . . . .	40 00	600 00
“ . . . .	3	Northborough, . . . . .	30 00	42 00
“ . . . .	6	Hudson, . . . . .	40 00	196 00
Blandford, . .	1	Huntington, . . . . .	45 00	45 00
“ . . . .	1	Chester, . . . . .	60 00	60 00
“ . . . .	1	Springfield (Central), .	75 00	75 00
“ . . . .	6	Westfield, . . . . .	50 00	275 00
Boxborough, . .	8	Concord, . . . . .	48 00	368 00
Boylston, . . .	1	Worcester (Classical), .	60 00	60 00
“ . . . .	3	Worcester (English), . .	60 00	156 00
“ . . . .	2	Clinton, . . . . .	40 00	56 00
Buckland, . . .	41	Shelburne Falls (Arms Acad- emy). . . . .	36 00	1,452 00
Carlisle, . . .	5	Concord, . . . . .	48 00	240 00
“ . . . .	1	Lowell, . . . . .	60 00	60 00
Charlemont, . .	16	Shelburne Falls (Arms Acad- emy). . . . .	36 00	528 00
Cheshire, . . .	14	Adams, . . . . .	30 00	400 00
Clarksburg, . .	8	North Adams, . . . . .	45 00	360 00
Colrain, . . . .	29	Shelburne Falls (Arms Acad- emy). . . . .	36 00	1,002 00
“ . . . .	1	Greenfield, . . . . .	30 00	30 00
“ . . . .	1	Northfield, . . . . .	30 00	5 25

<sup>1</sup> Academic course only.

*High school tuition reimbursements, etc. — Continued.*

TOWNS.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
Cummington, . . .	10	Northampton, . . .	\$50 00	\$425 00
Dana, . . .	1	Springfield (Central), . .	75 00	75 00
" . . .	10	Athol, . . .	36 00	287 40
" . . .	4	New Salem, . . .	30 00	118 50
Dunstable, . . .	1	Lowell, . . .	60 00	20 00
Eastham, . . .	15	Orleans, . . .	32 00	380 00
East Longmeadow, .	14	Springfield (Technical), <sup>1</sup> .	75 00	1,035 00
" " . . .	7	Springfield (Central), . .	75 00	525 00
Egremont, . . .	7	Great Barrington (Searles), .	54 00	342 00
Enfield, . . .	11	Athol, . . .	36 00	361 20
Erving, . . .	13	Greenfield, . . .	30 00	340 45
" . . .	1	Athol, . . .	36 00	36 00
" . . .	6	Orange, . . .	40 00	198 00
Florida, . . .	2	North Adams, . . .	45 00	90 00
Freetown, . . .	10	Fall River, . . .	60 00	282 75
" . . .	1	New Bedford, . . .	79 30	39 65
Gay Head, . . .	1	New Bedford, . . .	79 30	79 30
Gill, . . .	6	Montague (Turners Falls), .	30 00	153 00
" . . .	2	Bernardston (Powers Insti- tute).	20 00	40 00
Goshen, . . .	3	Williamsburg (Centre), . .	26 00	65 00
" . . .	1	Ashfield, . . .	30 00	30 00
Granville, . . .	1	Springfield (Technical), <sup>1</sup> .	75 00	75 00
" . . .	5	Westfield, . . .	50 00	200 00
Greenwich, . . .	1	Orange, . . .	40 00	26 00
" . . .	2	New Salem, . . .	30 00	34 50
" . . .	7	Athol, . . .	36 00	189 60
Halifax, . . .	1	Bridgewater, . . .	50 00	50 00
Hampden, . . .	1	Westfield, . . .	50 00	25 00
" . . .	1	Springfield (Central), . .	75 00	75 00
Hancock, . . .	1	Pittsfield, . . .	36 00	36 00
Hanson, . . .	26	Whitman, . . .	36 66	431 59
" . . .	1	Abington, . . .	40 00	20 00

<sup>1</sup> Academic course only.

*High school tuition reimbursements, etc. — Continued.*

TOWNS.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
Hanson, . . .	1	Hanover, . . .	\$30 00	\$15 00
Hawley, . . .	1	Northampton, . . .	50 00	25 00
" . . .	2	Shelburne Falls (Arms Acad- emy).	36 00	72 00
" . . .	1	Greenfield, . . .	30 00	30 00
Heath, . . .	6	Shelburne Falls (Arms Acad- emy).	36 00	186 00
Hinsdale, . . .	6	Pittsfield, . . .	36 00	193 50
" . . .	4	Dalton, . . .	30 00	101 25
Hubbardston, . . .	3	Gardner, . . .	30 00	90 00
" . . .	3	Barre, . . .	40 00	120 00
Lakeville, . . .	16	Middleborough, . . .	55 00	792 00
Lanesborough, . . .	5	Pittsfield, . . .	36 00	175 00
" . . .	1	Adams, . . .	30 00	20 00
Leverett, . . .	5	Amherst, . . .	35 00	175 00
" . . .	8	Montague (Centre), . . .	30 00	212 00
Leyden, . . .	3	Northfield, . . .	30 00	75 75
Lynnfield, . . .	23	Wakefield, . . .	40 00	775 00
" . . .	1	Lynn, . . .	60 00	60 00
" . . .	3	Peabody, . . .	45 00	135 00
Middlefield, . . .	3	Chester, . . .	60 00	180 00
" . . .	1	Springfield (Central), . . .	75 00	37 50
Middleton, . . .	19	Danvers, . . .	50 00	835 00
Monroe, . . .	3	North Adams, . . .	45 00	120 00
Monterey, . . .	10	Great Barrington (Searles), . . .	54 00	441 00
Montgomery, . . .	2	Westfield, . . .	50 00	100 00
" . . .	5	Huntington, . . .	45 00	193 50
Mt. Washington, . . .	6	Great Barrington (Searles), . . .	54 00	216 00
New Braintree, . . .	1	Hardwick, . . .	40 00	40 00
" " . . .	1	Warren, . . .	30 00	30 00
Newbury, . . .	9	Newburyport, . . .	{ 12 00 <sup>1</sup> 15 00 <sup>1</sup> }	54 00
New Marlborough, . . .	7	Great Barrington (Searles), . . .	54 00	360 00
Norfolk, . . .	3	Walpole, . . .	40 00	120 00
" . . .	1	Franklin, . . .	29 25	29 25

<sup>1</sup> Foreign languages only.

*High school tuition reimbursements, etc. — Continued.*

Towns.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
Norfolk, . . .	1	Wrentham, . . .	\$40 00	\$40 00
North Reading, . .	38	Reading, . . .	40 00	1,506 67
Oakham, . . .	4	Barre, . . .	40 00	136 00
Paxton, . . .	3	Worcester (English), . .	60 00	180 00
“ . . .	3	Worcester (Classical), . .	60 00	180 00
Pelham, . . .	9	Amherst, . . .	35 00	315 00
Pembroke, . . .	1	Brockton, . . .	60 00	13 13
Phillipston, . . .	5	Athol, . . .	36 00	133 00
Plainfield, . . .	3	Northampton, . . .	50 00	150 <sup>1</sup> / <sub>2</sub> 00
Plympton, . . .	4	Kingston, . . .	30 00	110 00
“ . . .	2	Middleborough, . . .	55 00	110 <sup>1</sup> / <sub>2</sub> 00
Prescott, . . .	3	Athol, . . .	36 00	108 00
“ . . .	2	New Salem, . . .	30 00	21 00
“ . . .	1	Northfield, . . .	30 00	7 50
Princeton, . . .	2	Worcester (South), . .	60 00	60 <sup>1</sup> / <sub>2</sub> 00
Raynham, . . .	11	Taunton, . . .	50 00	458 00
“ . . .	4	Easton, . . .	36 00	143 10
“ . . .	3	Bridgewater, . . .	50 00	105 00
Rehoboth, . . .	6	Taunton, . . .	50 00	132 50
“ . . .	1	Fall River, . . .	60 00	30 00
“ . . .	2	Attleborough, . . .	50 00	50 00
Richmond, . . .	5	Pittsfield, . . .	36 00	180 00
Rochester, . . .	4	Wareham, . . .	30 00	110 00
Rowe, . . .	2	North Adams, . . .	45 00	60 00
“ . . .	2	Shelburne Falls (Arms Academy).	36 00	48 00
Rowley, . . .	9	Newburyport, . . .	48 00	400 00
“ . . .	12	Ipswich, . . .	40 00	443 00
Royalston, . . .	6	Athol, . . .	36 00	164 80
“ . . .	2	Winchendon, . . .	28 00	56 00
“ . . .	3	Templeton, . . .	40 00	104 00
Russell, . . .	1	Westfield, . . .	50 00	10 00
“ . . .	8	Huntington, . . .	45 00	316 12

*High school tuition reimbursements, etc. — Continued.*

TOWNS.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
<i>Salisbury,</i> . . .	12	Newburyport, . . .	$\left\{ \begin{array}{l} \$12\ 00^1 \\ 15\ 00^1 \end{array} \right\}$	\$71 00
“ . . .	1	Amesbury, . . .	30 00	15 00
<i>Seckonk,</i> . . .	5	Attleborough, . . .	50 00	125 00
“ . . .	9	Fall River, . . .	60 00	225 00
“ . . .	2	Taunton, . . .	50 00	50 00
<i>Shirley,</i> . . .	1	Fitchburg, . . .	48 00	10 00
“ . . .	1	Concord, . . .	48 00	10 00
“ . . .	3	Ayer, . . .	30 00	45 00
<i>Shutesbury,</i> . . .	1	Amherst, . . .	35 00	35 00
“ . . .	3	Montague (Centre), . . .	30 00	50 25
<i>Southampton,</i> . . .	8	Easthampton, . . .	40 00	320 00
“ . . .	2	Northampton, . . .	50 00	100 00
<i>Southwick,</i> . . .	13	Westfield, . . .	50 00	625 00
<i>Sterling,</i> . . .	1	Worcester (South), . . .	60 00	30 00
<i>Sturbridge,</i> . . .	22	Southbridge, . . .	30 00	285 00
<i>Sunderland,</i> . . .	1	Greenfield, . . .	30 00	30 00
“ . . .	17	Amherst, . . .	35 00	569 50
<i>Swansea,</i> . . .	24	Fall River, . . .	60 00	697 50
<i>Texksbury,</i> . . .	30	Lowell, . . .	60 00	840 00
<i>Truro,</i> . . .	1	Wellfleet, . . .	40 00	40 00
“ . . .	5	Provincetown, . . .	40 00	144 00
<i>Tyngsborough,</i> . . .	9	Lowell, . . .	60 00	500 00
<i>Warwick,</i> . . .	6	Orange, . . .	40 00	178 00
“ . . .	3	Northfield, . . .	30 00	90 00
<i>Washington,</i> . . .	3	Chester, . . .	60 00	133 50
<i>Wendell,</i> . . .	4	Orange, . . .	40 00	142 00
“ . . .	1	New Salem, . . .	30 00	18 75
<i>West Brookfield,</i> . . .	23	Warren, . . .	30 00	328 50
“ “ . . .	1	Ware, . . .	40 00	20 00
<i>Westhampton,</i> . . .	8	Northampton, . . .	50 00	400 00
<i>Westminster,</i> . . .	6	Fitchburg, . . .	48 00	288 00
<i>West Stockbridge,</i> . . .	6	Pittsfield, . . .	36 00	216 00

<sup>1</sup> Foreign languages only.

*High school tuition reimbursements, etc. — Concluded.*

TOWNS.	Number of pupils.	High schools attended.	Rate per year.	Amounts.
West Stockbridge, .	11	Great Barrington, . . .	\$54 00	\$576 00
West Tisbury, .	5	Tisbury (Vineyard Haven),	40 00	179 00
Whately, . . .	11	Northampton, . . . .	50 00	525 00
" . . .	1	Greenfield, . . . .	30 00	30 00
Williamsburg, . .	3	Northampton, . . . .	50 00	75 00
Windsor, . . .	5	Dalton, . . . .	30 00	150 00
" . . .	1	Adams, . . . .	30 00	30 00
" . . .	1	Northampton, . . . .	50 00	50 00
Totals (97 towns),.	1,061	73 schools, . . . .	\$42 07	\$36,613 94

Towns having a valuation per pupil in *excess* of the State average (\$7,334): —

Boxford,	Hopedale,	Stockbridge,
Burlington,	Hull,	Topsfield,
Carver,	Lincoln,	Tyringham,
Chilmark,	Longmeadow,	Wellfleet,
Dover,	Marion,	Wenham,
Gosnold,	Mattapoisett,	Weston,
Hamilton,	Nahant,	Westwood,
Harvard,	Oak Bluffs,	Yarmouth. — 24

Towns that *did not avail* themselves of the law: —

Ashburnham,	Holland,	Sherborn (Academy),
Brewster,	Mashpee,	Tolland,
Brimfield (Academy),	New Ashford,	Wales,
Chesterfield,	Otis,	West Bridgewater,
Deerfield,	Peru,	Wilbraham (Academy),
Douglas,	Sandisfield,	Worthington. — 20
Hatfield (Academy),	Savoy,	

## SUPERINTENDENTS OF SCHOOLS.

*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Adams, Charles F., . . .	\$1,600	Spencer, . . .	Spencer.
Adams, O. H., . . .	1,500	Leicester, . . .	Charlton, Leicester.
Aldrich, George I., . . .	4,000	Brookline, . . .	Brookline.
Allen, H. L., . . .	1,500	Dalton, . . .	Cheshire, Dalton.
Allison, J. Francis, . . .	1,800	Great Barrington,	Great Barrington.
Anthony, John C., . . .	1,600	Braintree, . . .	Braintree.
Armstrong, George P., . . .	2,400	Belmont, . . .	Belmont, Lexington.
Atwell, F. G., . . .	1,500	Baldwinsville, . . .	Hubbardston, Phillipston, Roy-alston, Templeton.
Averill, Andrew P., . . .	1,600	Edgartown, . . .	Chilmark, Edgartown, Gay Head, Oak Bluffs, Tisbury, West Tisbury.
Badger, Abner A., . . .	2,000	East Weymouth, . . .	Weymouth.
Bagnall, Francis A., . . .	2,400	Adams, . . .	Adams.
Baldwin, Edward G., . . .	1,500	West Brookfield, . . .	New Braintree, Sturbridge, West Brookfield.
Barbour, Albert L., . . .	2,200	Natick, . . .	Natick.
Barr, Preston, . . .	1,500	Lee, . . .	Lee, Monterey, Otis, Tyring-ham.
Bates, Charles H., . . .	2,000	Middleborough, . . .	Middleborough.
Bates, William C., . . .	3,500	Cambridge, . . .	Cambridge.
Bemis, George M., . . .	1,500	Plainville, . . .	Norton, Plainville, Wrentham.
Benedict, Frank H., . . .	1,500	Sutton, . . .	Auburn, Sutton.
Bliss, Don C., . . .	2,800	Brockton, . . .	Brockton.
Blodgett, S. F., . . .	2,000	South Framing-ham.	Framingham.
Bowman, Mortimer H., . . .	1,500	Hatfield, . . .	Bernardston, Hadley, Hatfield.
Breck, Charles A., . . .	1,300	Methuen, . . .	Methuen.
Brick, Francis S., . . .	1,650	Uxbridge, . . .	Douglas, Uxbridge.
Bridgham, E. G., . . .	1,500	Lenox, . . .	Lenox.
Brittain, H. L., . . .	2,200	Hyde Park, . . .	Hyde Park.
Brockway, Clarence E., . . .	1,700	West Springfield, . . .	West Springfield.
Brooks, Stratton D., . . .	6,000	Boston, . . .	Boston.
Burke, J. E., Ass't, . . .	3,780	Boston, . . .	Boston.
Byram, Charles A., . . .	2,300	Pittsfield, . . .	Pittsfield.
Carfrey, J. H., . . .	2,000	Wakefield, . . .	Lynnfield, Wakefield.
Carr, Ernest P., . . .	1,650	Ayer, . . .	Ayer, West Boylston.
Caswell, Almorin O., . . .	1,500	Marblehead, . . .	Marblehead.
Chace, Seth Howard, . . .	2,000	97 18th Street, Lowell.	Dracut, North Reading, Tewksbury, Tyngsborough.
Chaffin, W. E., . . .	1,625	West Dennis, . . .	Brewster, Dennis, Yarmouth.

*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908 — Continued.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Chapman, Ira T., . . .	\$1,600	Millbury, . . .	Millbury, Oxford.
Clapp, George I., . . .	2,000	Woburn, . . .	Woburn.
Clay, Charles L., . . .	1,600	Harvard, . . .	Bolton, Boylston, Harvard, Shirley.
Cobb, Edwin S., . . .	1,500	Dighton, . . .	Berkley, Dighton, Rehoboth.
Coggins, W. L., . . .	1,000	Rockland, . . .	Rockland.
Cole, Albert S., . . .	1,500	North Dartmouth, . . .	Dartmouth, Westport.
Congdon, F. K., . . .	2,000	Northampton, . . .	Northampton.
Corbin, F. E., <sup>1</sup> . . .	2,000	Southbridge, . . .	Southbridge.
Cox, George W., . . .	2,000	Ware, . . .	Ware.
Cragin, W. N., . . .	1,800	Bedford, . . .	Bedford, Burlington, Wilming- ton.
Davison, F. P., . . .	1,800	Turners Falls, . . .	Montague.
De Meyer, John E., . . .	1,500	Egypt, . . .	Duxbury, Marshfield, Scituate.
Dixon, Edward, . . .	1,600	Orange, . . .	Orange.
Douglas, Frank A., <sup>2</sup> . . .	2,000	Winthrop, . . .	Winthrop.
Durfee, Everett B., . . .	3,000	Fall River, . . .	Fall River.
Eaton, Charles M., <sup>1</sup> . . .	2,100	Weston, . . .	Weston.
Edgerly, Joseph G., . . .	2,700	Fitchburg, . . .	Fitchburg.
Edson, Marshall O., . . .	1,500	Sandwich, . . .	Bourne, Mashpee, Sandwich.
Eldredge, William F., . . .	1,000	Rockport, . . .	Rockport.
Ellinwood, George F., . . .	1,500	Belchertown, . . .	Belchertown, Enfield.
Evans, Osman C., . . .	1,500	74 Westford Street, Lowell.	Billerica, Pepperell.
Fales, Lewis A., . . .	1,800	Attleborough, . . .	Attleborough.
Fish, Charles E., . . .	2,700	Manchester, . . .	Amesbury, Manchester.
Fitts, Edward P., . . .	1,650	Mansfield, . . .	Mansfield, Sharon, Stoughton.
Freeman, L. A., . . .	1,500	96 Comstock Ave- nue, Providence, R. I.	Foxborough, Seekonk.
Frost, Gaius B., . . .	1,500	Georgetown, . . .	Georgetown, Groveland, Row- ley.
Fuller, Robert J., . . .	1,900	North Attle- borough.	North Attleborough.
Galger, George H., . . .	1,500	Hyannis, . . .	Barnstable.
Gamwell, Irving H., <sup>1</sup> . . .	1,800	Franklin, . . .	Franklin.
Gay, George E., . . .	2,300	Haverhill, . . .	Haverhill.
Goodhue, E. W., . . .	1,500	Haydenville, . . .	Chesterfield, Williamsburg, Worthington.
Gordy, Wilbur F., . . .	4,000	Springfield, . . .	Springfield.
Gray, John C., . . .	2,000	Chicopee, . . .	Chicopee.
Gray, Lee T., . . .	1,800	Palmer, . . .	Palmer.
Gregory, B. C., . . .	2,800	Chelsea, . . .	Chelsea.

<sup>1</sup> Also principal of high school.

<sup>2</sup> Also principal of grammar school.



*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908 — Continued.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Grout, Edgar H., . . .	\$1,500	East Bridgewater,	East Bridgewater, Raynham, West Bridgewater.
Grover, G. Alvin, . . .	1,600	Charlemont, . . .	Charlemont, Florida, Hawley, Heath, Monroe, Rowe.
Gushee, W. E., . . .	1,600	Agawam, . . .	Agawam, Ludlow.
Haley, C. W., . . .	1,800	Milford, . . .	Milford.
Hall, I. Freeman, . . .	2,850	North Adams, . .	North Adams.
Hall, Wells A., <sup>1</sup> . . .	2,000	Concord, . . .	Concord.
Hardy, A. L., . . .	1,800	Amherst, . . .	Amherst, Pelham.
Harris, C. A., . . .	1,650	Hanover, . . .	Hanover, Hanson, Norwell.
Harrub, H. W., . . .	2,300	Taunton, . . .	Taunton.
Hatch, William E., . .	4,000	New Bedford, . .	New Bedford.
Hayward, Harriet S., Ass't,	1,500	Brockton, . . .	Brockton.
Heald, A. A., . . .	1,750	Wareham, . . .	Marion, Wareham.
Heavens, Francis J., . .	2,000	Plymouth, . . .	Plymouth.
Herron, Schuyler F., . .	2,300	Winchester, . . .	Winchester.
Hervey, Henry D., . . .	2,700	Malden, . . .	Malden.
Hill, Frank H., . . .	1,600	Harwich, . . .	Chatham, Eastham, Harwich, Orleans.
Hine, Roderick W., . . .	2,200	Dedham, . . .	Dedham.
Hobbs, William C., . . .	2,000	Norwood, . . .	Norwood.
Howard, Elmer F., . . .	1,625	East Northfield, .	Gill, Leyden, Northfield, Warwick.
Howard, Nelson G., . . .	2,300	Hingham Centre, .	Cohasset, Hingham, Hull.
Howes, Alfred F., . . .	1,500	Sheffield, . . .	Mt. Washington, New Marlborough, Sheffield.
Humphrey, Chester W., .	1,500	Rochester, . . .	Carver, Lakeville, Rochester.
Hunt, Charles L., . . .	1,800	Clinton, . . .	Clinton.
Hutchinson, S. C., . . .	1,500	Cochituate, . . .	Dover, Sudbury, Wayland.
Jacoby, Asher J., . . .	2,500	East Milton, . . .	Milton.
Jones, Herbert J., . . .	1,600	Holden, . . .	Holden, Oakham, Paxton, Rutland.
Judkins, Clarence L., . .	1,500	Ashfield, . . .	Ashfield, Cummington, Goshen, Plainfield.
Kendall, F. L., . . .	1,500	Chelmsford, . . .	Carlisle, Chelmsford, Dunstable.
Kennedy, Ambrose, . . .	888 <sup>1</sup>	Blackstone, . . .	Blackstone.
Kingman, F. W., . . .	1,700	Walpole, . . .	Medfield, Walpole.
Knox, Herman N., . . .	1,500	Somerset, . . .	Freetown, Somerset, Swansea.
Lea, Watson C., . . .	1,500	Holbrook, . . .	Avon, Holbrook, Randolph.
Lewis, Alvan R., . . .	1,600	Provincetown, . .	Provincetown, Truro, Wellfleet.
Lewis, Homer P., . . .	4,000	Worcester, . . .	Worcester.
Lewis, Mary A., Ass't, . .	1,300	Cambridge, . . .	Cambridge.
Lincoln, Mary L., . . .	1,100	Lancaster, . . .	Lancaster.

<sup>1</sup> Also principal of high school.

*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908 — Continued.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Loring, Everett G., . . .	\$1,500	Kingston, . . .	Halifax, Kingston, Pembroke, Plympton.
Lyman, C. S., . . .	1,500	Hudson, . . .	Hudson, Lincoln.
Mackin, John C., . . .	1,500	Maynard, . . .	Boxborough, Maynard, Stow.
Manning, John H., <sup>1</sup> . . .	1,550	Groton, . . .	Groton.
Marsh, Frank M., . . .	2,100	Fairhaven, . . .	Acushnet, Fairhaven, Matta- poisett.
Martin, Robert M., . . .	940	12½ Hawthorne Street, Salem.	Ipswich, Topsfield.
Mason, Wallace E., <sup>1</sup> . . .	1,900	North Andover, . . .	North Andover.
Melcher, S. A., <sup>1</sup> . . .	2,250	Whitinsville, . . .	Northbridge.
Merriam, Burr Jay, . . .	1,500	Brookfield, . . .	Brookfield, North Brookfield.
Merrill, Leon O., . . .	1,500	Huntington, . . .	Blandford, Huntington, Mont- gomery, Russell.
Miller, W. D., . . .	1,600	Easthampton, . . .	Easthampton, Southampton, Westhampton.
Mitchell, Walter G., . . .	1,200	Williamstown, . . .	Williamstown.
Morrell, James G., . . .	1,500	Georgetown, . . .	Boxford, Newbury, Salisbury, West Newbury.
Morss, Charles H., . . .	2,800	Medford, . . .	Medford.
Morton, Orion A., . . .	1,800	Marlborough, . . .	Marlborough.
Nickerson, Fred H., . . .	2,400	Melrose, . . .	Melrose.
O'Donnell, James J., . . .	3,000	Holyoke, . . .	Holyoke.
Palmer, Corwin F., . . .	1,900	Andover, . . .	Andover.
Parker, Walter S., Ass't, . . .	3,780	Boston, . . .	Boston.
Parkinson, William D., . . .	2,200	Waltham, . . .	Waltham.
Parlin, Frank E., . . .	2,800	Quincy, . . .	Quincy.
Paull, A. R., . . .	1,500	Shelburne Falls, . . .	Buckland, Colrain, Shelburne.
Pearson, Parker T., . . .	1,500	Warren, . . .	Holland, Wales, Warren.
Peaslee, Frank J., . . .	3,000	Lynn, . . .	Lynn.
Pelo, W. J., . . .	1,000	Swampscott, . . .	Swampscott.
Perkins, James S., . . .	1,800	Canton, . . .	Canton.
Perkins, John W., . . .	2,500	Salem, . . .	Salem.
Perrin, Marshall L., . . .	1,500	Wellesley Hills, . . .	Wellesley.
Poland, Mary L., . . .	1,550	15 Myrtle Street, Springfield.	East Longmeadow, Hampden, Longmeadow, Wilbraham.
Pope, F. S., . . .	1,700	North Easton, . . .	Easton.
Pratt, Louis A., . . .	1,500	North Dana, . . .	Dana, Greenwich, New Salem, Prescott.
Price, Wilfred H., . . .	1,800	Watertown, . . .	Watertown.
Prior, Charles F., . . .	1,500	Granville, . . .	Granville, Sandisfield, South- wick, Tolland.
Putney, Freeman, . . .	2,300	Gloucester, . . .	Gloucester.
Putney, Walter K., . . .	1,000	Needham, . . .	Needham.
Rafter, Augustine L., Ass't, . . .	3,780	Boston, . . .	Boston.

<sup>1</sup> Also principal of high school.

*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908 — Continued.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Record, C. A., . . .	\$2,000	Abington, . . .	Abington, Bridgewater.
Richardson, Herbert E., . .	1,800	Greenfield, . . .	Greenfield.
Riley, William E., . . .	1,500	Hinsdale, . . .	Hinsdale, Peru, Savoy, Windsor.
Ripley, Mrs. Ellor E., Ass't,	3,780	Boston, . . .	Boston.
Robinson, Albert, . . .	1,800	Peabody, . . .	Peabody.
Robinson, Ernest W., . .	2,100	Webster, . . .	Dudley, Webster.
Rugg, George, . . .	1,500	Princeton, . . .	Princeton, Sterling, Westminster.
Safford, Adelbert L., . .	2,200	Beverly, . . .	Beverly.
Sanborn, H. C., . . .	1,600	Danvers, . . .	Danvers.
Sanderson, W. H., . . .	1,600	Chester, . . .	Becket, Chester, Middlefield, Washington.
Scully, John F., . . .	2,500	Arlington, . . .	Arlington.
Sheridan, Bernard M., . .	3,000	Lawrence, . . .	Lawrence.
Sims, William F., . . .	1,800	Northborough, . .	Berlin, Northborough, Shrewsbury, Southborough.
Simmons, Charles L., . .	2,300	Westfield, . . .	Westfield.
Small, Robert O., . . .	1,800	Grafton, . . .	Grafton, Upton.
Southworth, Gordon A., . .	3,000	Somerville, . . .	Somerville.
Spaulding, Frank E., . .	4,000	Newtonville, . .	Newton.
Sprague, Wilbur B., . .	1,800	Winchendon, . .	Ashburnham, Winchendon.
Stearns, Mrs. Cora A., . .	1,500	Wendell Depot, . .	Erving, Leverett, Shutesbury, Wendell.
Stevens, Charles E., . .	2,000	Stoneham, . . .	Stoneham, Saugus.
Stone, Melville A., . . .	1,700	Reading, . . .	Merrimac, Reading.
Taylor, Herbert F., . . .	2,000	Hopedale, . . .	Bellingham, Hopedale, Mendon.
Thompson, Thomas E., . .	2,200	Leominster, . . .	Leominster.
Thompson, Victor V., . .	1,500	Hopkinton, . . .	Ashland, Hopkinton.
Thomson, Andrew S., . .	1,500	Wenham Depot, . .	Essex, Hamilton, Middleton, Wenham.
Tirrell, Edwin S., <sup>1</sup> . . .	1,400	Nahant, . . .	Nahant.
Tower, A. O., . . .	1,500	Barre, . . .	Barre, Hardwick, Petersham.
Tucker, Charles A., <sup>1</sup> . .	1,800	Stockbridge, . .	Stockbridge.
Van Ornum, F. B., . . .	1,500	Cheshire, . . .	Clarksburg, Hancock, Lanesborough, New Ashford.
Walradt, Henry M., . . .	1,000	Whitman, . . .	Whitman.
Waldron, H. C., <sup>1</sup> . . .	1,700	Westborough, . .	Westborough.
Ward, W. Scott, . . .	2,000	Athol, . . .	Athol.
Webber, Arthur B., . . .	1,600	Littleton, . . .	Acton, Littleton, Westford.
West, M. J., . . .	1,500	Millis, . . .	Millis, Norfolk, Westwood.
Wheeler, F. A., . . .	1,500	Monson, . . .	Brimfield, Monson.
Wheeler, Ulysses G., . .	2,500	Everett, . . .	Everett.

<sup>1</sup> Also principal of high school.

*List of superintendents, alphabetically arranged, with their superintendencies, Jan. 31, 1908 — Concluded.*

SUPERINTENDENTS.	Salaries.	Addresses.	Superintendencies.
Whitcomb, Arthur K., . .	\$3,000	Lowell, . . .	Lowell.
White, Maurice P., Ass't, .	3,780	Boston, . . .	Boston.
Whitney, Fairfield, . . .	1,700	Townsend, . . .	Ashby, Lunenburg, Townsend.
Whittemore, F. E., . . .	1,750	South Hadley Falls,	Granby, South Hadley.
Wiggin, Ralph L., . . .	1,400	Falmouth, . . .	Falmouth.
Willard, Edgar L., . . .	1,600	Newburyport, . .	Newburyport.
Williams, F. F., . . .	1,500	West Stockbridge,	Alford, Egremont, Richmond, West Stockbridge.
Willson, Myron J., . . .	1,650	South Deerfield, .	Conway, Deerfield, Sunder- land, Whately.
Winslow, William H, . .	2,000	Revere, . . .	Revere.
Wood, Judson L., . . .	2,100	Gardner, . . .	Gardner.
- . . . .	-	- . . . .	Holliston, Medway, Sherborn.

## Union superintendents.

Number.	UNIONS.	When formed.	Valuation May 1, 1906.	No. of schools, 1905-1906.	EACH TOWN'S SHARE OF SUPERINTENDENT'S —		State aid to each town.	Superintendent's salary.	When union superintendent began.	JOINT COMMITTEE.	
					Service.	Salary.				Chairman.	Secretary.
1	Duxbury, Marshfield, Scituate.	1888 1888 1888	\$1,992,643 1,716,200 3,993,671	10 11 12	$\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$	\$250 00 250 00 250 00	\$416 66 416 66 —	\$1,500 00	June 1.	Dr. Nathaniel K. Noyes, Duxbury.	Clara M. Skeelee, Scituate.
2	Hubbardston, Phillipston, Royalston, Templeton.	1889 1889 1889 1889	657,280 271,413 493,598 1,487,053	9 4 7 17	$\frac{2}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{5}{10}$	150 00 75 00 150 00 375 00	250 00 125 00 250 00 675 00	1,500 00	July 1.	S. E. Greenwood, Templeton.	Mrs. Mary R. Chaffin, Phillipston.
3	Ashland, Hopkinton.	1889 1889	1,055,604 1,609,600	9 13	$\frac{2}{3}$ $\frac{3}{4}$	300 00 450 00	500 00 750 00	1,500 00	July 1.	George H. Halpin, Hopkinton.	Amasa S. Barnes, Ashland.
4	Easthampton, Southampton, Westhampton.	1889 1889 1889	3,944,195 492,772 222,640	29 8 5	12 days. 5 days. 3 days.	617 68 81 26 51 06	— 135 43 85 10	1,600 00	July 1.	Rev. Franz Willer, Easthampton.	Chas. N. Loud, Westhampton.
5	Barre, Hardwick, Petersham.	1890 1890 1890	1,632,270 1,680,673 701,636	14 14 6	$\frac{1}{4}$ $\frac{1}{35}$ $\frac{9}{35}$	300 00 321 43 128 57	500 00 535 72 214 28	1,600 00	May 1.	George A. Brown, Barre.	Chas. N. Walcott (Gilbertville), Hardwick.
6	Berlin, Northborough, Shrewsbury, Southborough.	1890 1890 1890 1890	537,915 1,344,980 1,425,409 1,515,704	5 9 10 9	$\frac{1}{4}$ $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$	107 40 214 20 214 20 214 20	179 00 357 00 357 00 357 00	1,800 00	May 1.	Daniel W. Bemis, Shrewsbury.	Samuel T. Maynard, Shrewsbury.
7	Becket, Cheshire, Middlefield, Washington.	1890 1890 1890 1890	465,667 658,588 189,585 273,519	7 10 6 5	1-2 days. 2-3 days. .9 days. .6 days.	168 00 351 00 138 00 93 00	280 00 585 00 230 00 155 00	1,600 00	July 1.	James H. Keefe, Cheshire.	Howard R. Molineaux, Becket.
8	Brimfield, Monson.	1890 1890	397,635 1,714,316	7 23	$\frac{3}{10}$ $\frac{7}{10}$	225 00 525 00	375 00 875 00	1,500 00	April 30.	Robert V. Savin, Brimfield.	Rufus S. Stebbins, Monson.

*Union superintendencies — Continued.*

Number.	UNIONS.	When formed.	Valuation May 1, 1906.	No. of schools, 1905-1906.	EACH TOWN'S SHARE OF SUPERINTENDENT'S —		State aid to each town.	Superintendent's salary.	When union superintendent began.	JOINT COMMITTEE.	
					Service.	Salary.				Chairman.	Secretary.
9	Princeton, Sterling, Westminster,	1890 1890 1890	\$1,020,468 960,900 720,350	9 7 12	$\frac{1}{2}$ $\frac{2}{3}$ $\frac{2}{3}$	\$150 00 300 00 300 00	\$250 00 500 00 500 00	\$1,500 00	July 1,	Moses C. Goodnow, Princeton.	Mary A. Dupee, Westminster.
10	Mansfield, Sharon, Stoughton,	1891 1891 1891	2,631,343 2,351,295 3,414,548	21 11 22	2 1 2	300 00 150 00 300 00	500 00 250 00 500 00	1,800 00	April 6,	Dr. Edward H. Ewing, Stoughton.	Loring M. Monk, Sharon.
11	Dracut, North Reading, Tewksbury, Tyngsborough,	1891 1891 1891 1891	2,181,183 669,769 985,246 491,577	16 4 7 5	$\frac{4}{10}$ $\frac{1}{10}$ $\frac{4}{10}$ $\frac{1}{10}$	300 00 75 00 300 00 75 00	500 00 125 00 500 00 125 00	1,800 00	Sept. 1,	Nelson E. Huntley, 332 Merrimac Street, Lowell.	Ophelia S. Brown, Tyngsborough.
12	Brookfield, North Brookfield,	1891 1891	1,221,497 1,630,817	17 11	$\frac{1}{2}$ $\frac{1}{2}$	375 00 375 00	625 00 625 00	1,500 00	July 1,	L. Emerson Barnes, North Brookfield.	Anson P. Goodell, Brookfield.
13	Grafton, Upton,	1891 1891	2,434,229 1,075,164	22 9	$\frac{3}{4}$ $\frac{1}{4}$	562 50 187 50	937 50 312 50	1,700 00	July 1,	Francis M. McGarry, Grafton.	Appleton P. Williams, West Upton.
14	Millbury, Oxford,	1891 1891	2,291,295 1,611,820	19 16	3 2	450 00 300 00	750 00 500 00	1,600 00	Aug. 1,	Herbert V. Chaffee, Oxford.	Edw. F. Hull, Millbury.
15	Abington, Bridgewater,	1891 1891	2,676,051 3,219,505	20 25	$\frac{1}{2}$ $\frac{1}{2}$	375 00 375 00	625 00 625 00	2,000 00	Aug. 1,	Wm. J. Sheehan, North Abington.	Lyman A. Pratt, Bridgewater.
16	Buckland, Colrain, Shelburne,	1892 1892 1892	699,321 625,890 1,014,914	8 15 10	$\frac{3}{10}$ $\frac{4}{10}$ $\frac{3}{10}$	225 00 300 00 225 00	375 00 500 00 375 00	1,500 00	April 24,	Edwin Baker, Shelburne Falls.	Jonathan E. Davenport, Colrain.
17	Bourne, Mashpee, Sandwich,	1892 1892 1892	2,871,575 195,610 980,225	11 2 8	$\frac{2}{50}$ $\frac{2}{50}$ $\frac{2}{50}$	337 50 75 00 337 50	562 50 125 00 562 50	1,500 00	July 1,	R. H. Faunce, Sandwich.	Anna M. Starbuck (Bournedale), Bourne.

		1892	1,693,055	14	9 days.	350 00	583 33	1,500 00	May 20,			
18	East Bridgewater, .	1892	727,687	8	4 days.	250 00	416 67		Wm. H. Taylor, East Bridgewater.		Susan B. Dunphe, East Bridgewater.	
	West Bridgewater, .	1892	1,124,130	10	7 days.	150 00	250 00					
19	Brewster, <sup>1</sup> .	1903	560,135	4	$\frac{4}{32}$	115 39	192 31	1,625 00	July 1,	Edmund W. Eldridge, Yarmouth.	E. Herbert Howes, Dennis.	
	Dennis, .	1892	1,208,495	13	$\frac{13}{26}$	375 00	625 00					
	Yarmouth, .	1892	1,848,016	9	$\frac{9}{26}$	259 61	432 69					
20	Holland, <sup>2</sup> .	1902	86,516	1	$\frac{1}{20}$	37 50	62 50	1,500 00	Aug. 1,	Dr. Chas. A. De Land, Warren.	John E. Dalton, Warren.	
	Wales, .	1893	263,120	4	$\frac{4}{20}$	112 50	187 50					
	Warren, .	1893	1,780,646	16	$\frac{16}{20}$	600 00	1,000 00					
21	East Longmeadow, .	1893	642,155	10	$\frac{10}{34}$	220 60	367 60	1,550 00	July 1,	Oliver Louis Wolcott, East Longmeadow.	Dr. H. G. Welbe, Wil- braham.	
	Longmeadow, .	1893	1,039,122	5	$\frac{5}{34}$	110 30	183 80					
	Hampden, .	1893	363,809	6	$\frac{6}{34}$	132 34	220 64					
	Wilbraham, .	1893	1,018,822	13	$\frac{13}{34}$	286 76	477 96					
22	Dartmouth, .	1893	913,125	12	$\frac{1}{2}$	375 00	625 00	1,500 00	Sept. 1,	Andrew B. Cushman, South Dartmouth.	Chas. F. Sanford, Westport.	
	Westport, .	1893	1,673,750	19	$\frac{1}{2}$	375 00	625 00					
23	Hanover, .	1894	1,386,945	10	$\frac{1}{3}$	250 00	416 67	1,500 00	May 1,	Dr. Clarence L. Howes, Hanover.	Mrs. Mary E. Curtis, Norwell.	
	Hanson, .	1894	1,084,911	8	$\frac{1}{3}$	250 00	416 66					
	Norwell, .	1894	827,483	7	$\frac{1}{3}$	250 00	416 67					
24	Cheshire, .	1894	696,066	7	$\frac{7}{10}$	225 00	375 00	1,500 00	April 10,	George Z. Dean, Cheshire.	Payson E. Little, Dal- ton.	
	Dalton, .	1894	3,197,716	17	$\frac{7}{10}$	525 00	875 00					
25	Provincetown, .	1894	1,905,400	22	$\frac{22}{32}$	515 64	859 40	1,600 00	Sept. 7,	A. T. Williams, Prov- inctown.	Everett I. Nye, Well- fleet.	
	Truro, <sup>2</sup> .	1902	368,030	5	$\frac{5}{32}$	117 18	195 30					
	Wellfleet, .	1894	1,054,193	5	$\frac{5}{32}$	117 18	195 30					
26	Norton, .	1894	1,011,550	11	$\frac{11}{40}$	300 00	500 00	1,500 00	May 1,	Elbridge J. Whitaker, Wrentham.	W. C. S. Wood, Nor- ton.	
	Plainville, <sup>3</sup> .	1905	689,002	8	$\frac{8}{40}$	225 00	375 00					
	Wrentham, .	1894	1,041,169	8	$\frac{8}{40}$	225 00	375 00					
27	Bellingham, .	1894	790,995	9	$\frac{1}{3}$	250 00	416 66	2,000 00	May 28,	Frank H. Wood, Men- don.	Frank J. Dutcher, Hopedale.	
	Hopedale, .	1894	5,274,820	12	$\frac{1}{3}$	250 00	416 66					
	Mendon, .	1894	624,320	6	$\frac{1}{3}$	250 00	416 66					
28	Chatham, <sup>1</sup> .	1903	997,252	10	$\frac{10}{38}$	267 86	446 43	1,600 00	Oct. 1,	Erastus T. Bourse, Chatham.	George S. Hall, Or- leans.	
	Eastham, .	1894	341,920	10	$\frac{10}{38}$	53 57	89 28					
	Harwich, .	1894	1,185,825	12	$\frac{12}{38}$	321 43	535 72					
	Orleans, .	1894	599,571	4	$\frac{4}{38}$	107 14	178 57					

<sup>1</sup> Added Oct. 17, 1903, by decree of State Board of Education.<sup>2</sup> Added in 1902.<sup>3</sup> A part of Wrentham; made a town in 1905.

## Union superintendencies — Continued.

Number.	UNIONS.	When formed.	Valuation May 1, 1906.	No. of schools, 1905-1906.	EACH TOWN'S SHARE OF SUPERINTENDENT'S —		State aid to each town.	Superintendent's salary.	When union superintendent began.	JOINT COMMITTEE.	
					Service.	Salary.				Chairman.	Secretary.
29	Granby, South Hadley.	1895 1895	\$486,641 2,453,779	6 24	$\frac{1}{4}$ $\frac{3}{4}$	\$187 50 562 50	312 50 937 50	\$1,750 00	April 1,	Arthur S. Gaylord, South Hadley Falls.	George S. Lyman, South Hadley.
30	Gill, Leyden, <sup>1</sup> Northfield, Warwick.	1895 1901 1895 1895	413,405 198,321 1,203,794 333,460	6 5 9 4	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{2}{3}$ $\frac{1}{2}$	150 00 150 00 300 00 150 00	250 00 250 00 500 00 250 00	1,625 00	May 7,	L. R. Smith, East Northfield.	Nellie M. Wood, North- field.
31	Bolton, Boyiston, Harvard, Shirley.	1895 1895 1895 1895	489,358 463,768 1,122,444 968,648	4 4 5 7	$\frac{6}{28}$ $\frac{1}{28}$ $\frac{9}{28}$ $\frac{5}{28}$	160 71 133 83 241 07 214 29	267 86 223 21 401 79 357 14	1,600 00	July 1,	Clifford L. Russell, Harvard.	George L. Wright, Boyiston Centre.
32	Chilmark, <sup>2</sup> Edgartown, Gay Head, <sup>3</sup> Oak Bluffs, Tisbury, West Tisbury.	1897 1895 1902 1895 1895 1895	262,204 850,045 33,735 1,774,450 1,420,787 426,645	2 5 1 6 6 4	$\frac{2}{20}$ $\frac{4}{20}$ $\frac{1}{20}$ $\frac{5}{20}$ $\frac{5}{20}$ $\frac{3}{20}$	75 00 150 00 37 50 187 50 187 50 112 50	125 00 250 00 62 50 312 50 312 50 187 50	1,600 00	July 1,	Wm. Channing Nevins, Edgartown.	Mrs. Lucinda S. St. John (Vineyard Haven), Tisbury.
33	Georgetown, Groveland, Rowley.	1895 1895 1895	995,584 1,159,715 754,693	8 13 3	$\frac{2}{20}$ $\frac{2}{20}$ $\frac{1}{20}$	300 00 300 00 150 00	500 00 500 00 250 00	1,500 00	Sept. 1,	Albert L. Wales, Groveland.	Frank E. Richardson, Rowley.
34	Carlisle, Chelmsford, Dunstable.	1896 1896 1896	421,280 3,153,080 283,701	3 25 3	$\frac{3}{20}$ $\frac{19}{20}$ $\frac{2}{20}$	112 50 562 50 75 00	187 50 937 50 125 00	1,500 00	Aug. 1,	John J. Monahan, West Chelmsford.	Lucy Roby Davis, Carlisle.
35	Holliston, Medway, Sherborn.	1896 1896 1896	1,541,196 1,337,870 1,310,941	13 11 7	$\frac{2}{20}$ $\frac{2}{20}$ $\frac{1}{20}$	300 00 300 00 150 00	500 00 500 00 250 00	1,550 00	Sept. 1,	Mr. C. H. M. Bartlett, Holliston.	Chas. M. Smith, Med- way.
36	Aushnet, Fairhaven, Mattapoisett.	1897 1897 1897	660,920 2,805,470 1,550,539	7 20 7	$\frac{1}{4}$ $\frac{4}{4}$ $\frac{4}{4}$	125 00 150 00 125 00	208 33 833 34 208 33	1,800 00	July 1,	Leuel Le Baron Dex- ter, Mattapoisett.	Jos. K. Nye, Fair- haven.



37	Charlemont, Florida, Hawley, Heath, <sup>3</sup> Monroe, Rowe, .	. . . . . .	1897 1897 1897 1902 1897 1897	388,275 155,167 136,383 160,951 155,285 171,208	10 5 6 4 4 6	10 <sup>3</sup> / <sub>2</sub> 4 <sup>3</sup> / <sub>2</sub> 4 <sup>3</sup> / <sub>2</sub> 4 <sup>3</sup> / <sub>2</sub> 4 <sup>3</sup> / <sub>2</sub> 5 <sup>3</sup> / <sub>2</sub>	224 38 93 75 140 62 70 31 93 75 117 19	390 63 156 25 234 37 117 19 156 25 195 31	1,600 00	April 26,	Warren W. Smith, East Charlemont.	Frank B. Burrington, Heath.
38	Ashby, Lunenburg, <sup>4</sup> Townsand, .	. . .	1897 1905 1897	490,995 1,022,658 1,158,349	4 8 9	2 <sup>1</sup> / <sub>10</sub> 3 <sup>1</sup> / <sub>10</sub> 5 <sup>1</sup> / <sub>10</sub>	150 00 225 00 375 00	250 00 375 00 625 00	1,700 00	July 1,	J. W. Eastman, Townsand.	Austen T. Kempton, Lunenburg.
39	Dover, Sudbury, Wayland, .	. . .	1898 1898 1898	1,040,126 1,232,074 1,970,927	6 7 12	2 <sup>1</sup> / <sub>10</sub> 3 <sup>1</sup> / <sub>10</sub> 5 <sup>1</sup> / <sub>10</sub>	150 00 225 00 375 00	250 00 375 00 625 00	1,500 00	Sept. 1,	Richard H. Bond, Needham.	Mrs. Evora A. Wotton, Dover.
40	New Braintree, Sturbridge, West Brookfield, .	. . .	1898 1898 1898	399,720 984,145 837,928	4 12 7	3 <sup>1</sup> / <sub>10</sub> 4 <sup>1</sup> / <sub>10</sub> 5 <sup>1</sup> / <sub>10</sub>	225 00 300 00 225 00	375 00 500 00 375 00	1,500 00	May 20,	George K. Tufts, New Braintree.	A. H. Warfield, West Brookfield.
41	Ayer, West Boylston, .	. .	1898 1898	1,916,440 728,603	10 7	1 <sup>1</sup> / <sub>2</sub> 1 <sup>1</sup> / <sub>2</sub>	375 00 375 00	625 00	1,650 00	July 1,	Albert W. Hinds, West Boylston.	George H. Brown, Ayer.
42	Acton, . Littleton, Westford, .	. . .	1898 1898 1898	1,816,845 997,127 1,648,119	10 7 15	3 <sup>1</sup> / <sub>10</sub> 2 <sup>1</sup> / <sub>10</sub> 5 <sup>1</sup> / <sub>10</sub>	225 00 150 00 375 00	375 00 250 00 625 00	1,800 00	Sept. 1,	Waldo E. Conant, Lit- tleton.	Chas. J. Williams, Ac- ton.
43	Medfield, Walpole, .	. .	1899 1899	1,548,050 3,851,581	7 20	2 <sup>1</sup> / <sub>2</sub> 3 <sup>1</sup> / <sub>2</sub>	300 00 450 00	500 00	1,700 00	April 1,	J. Edward Plimpton, Norwood.	Rev. Chas. H. Wil- liams, Medfield.
44	Freetown, Somerset, <sup>5</sup> Swansea, .	. . .	1900 1902 1900	839,410 1,177,790 1,205,093	8 13 12	1 <sup>1</sup> / <sub>2</sub> 1 <sup>1</sup> / <sub>2</sub> 1 <sup>1</sup> / <sub>2</sub>	250 00 250 00 250 00	416 67 416 67 416 66	1,500 00	May 1,	Job Gardner, South Swansea.	Viola N. Burns, Free- town.
45	Marion, Wareham, <sup>6</sup>	. . .	1900 1900	1,631,000 3,517,991	6 21	2 <sup>1</sup> / <sub>2</sub> 3 <sup>1</sup> / <sub>2</sub>	300 00 450 00	500 00 750 00	1,750 00	June 1,	John Huxtable, Ware- ham.	A. C. Vose, Marion.
46	Holden, Oakham, Paxton, Rutland, .	. . . .	1900 1900 1900 1900	1,463,214 344,767 345,100 717,829	16 5 3 6	10 <sup>2</sup> / <sub>10</sub> 3 <sup>2</sup> / <sub>10</sub> 2 <sup>2</sup> / <sub>10</sub> 5 <sup>2</sup> / <sub>10</sub>	375 00 112 50 75 00 187 50	625 00 187 50 125 00 312 50	1,600 00	Aug. 1,	Jesse Allen, Oakham, Addie M. Holden, Hol- den.	

<sup>1</sup> Added in 1901.<sup>2</sup> Added in 1897.<sup>3</sup> Added in 1902.<sup>4</sup> Added May 16, 1905, by decree of the State Board of Education.

## Union superintendencies -- Continued.

Number.	UNIONS.	When formed.	Valuation May 1, 1906.	No. of schools, 1905-1906.	EACH TOWN'S SHARE OF SUPERINTENDENT'S --		State aid to each town.	Superintendent's salary.	When union superintendent's salary began.	JOINT COMMITTEE.	
					Service.	Salary.				Chairman.	Secretary.
47	Ashfield, Cummington, Goshen, Plainfield, .	1900	\$888,221	11	1½s	\$204 64	\$491 06	1,500 00	Sept. 1,	Henry Goodwin Smith, Goshen.	George B. Church, Shelburne Falls.
		1900	310,377	8	¾s	214 29	357 15				
		1900	164,010	4	¾s	107 14	178 57				
		1900	178,467	5	¾s	133 93	223 22				
48	Bedford, .	1900	1,254,659	4	7½s	262 50	437 50	1,800 00	June 1,	Robert H. Gowing, Wilmington.	Elihu G. Loomis, Bedford.
	Burlington, .	1900	590,062	3	¾s	112 50	187 50				
	Wilmington, .	1900	1,248,787	11	10½s	375 00	625 00				
49	Lynnfield, .	1900	740,136	4	1½s	75 00	125 00	1,900 00	Aug. 1,	Franklin W. Freeman, Lynnfield Centre.	Chas. E. Montague, Wakefield.
	Wakefield, .	1900	8,355,689	49	9½s	675 00	—				
50	Amherst, .	1901	3,628,217	18	4½	600 00	250 00	1,800 00	April 1,	C. L. Ward, West Pelham.	Albion B. Allen, Amherst.
	Pelham, .	1901	197,680	4	½	150 00	—				
51	Barnardston, .	1901	414,700	6	9½s	180 00	300 00	1,500 00	April 15,	Edwin B. Hale, Barnardston.	L. A. Powers, Hatfield.
	Hadley, .	1901	1,155,885	11	1½s	330 00	550 00				
	Hatfield, .	1901	1,453,988	9	¾s	240 00	400 00				
52	Blandford, .	1901	435,754	7	7½s	175 00	291 67	1,500 00	July 1,	A. G. Wightman, Huntingdon.	A. H. Nye, Russell.
	Huntington, .	1901	583,180	11	1½s	275 00	458 33				
	Montgomery, .	1901	146,979	4	4½s	100 00	166 67				
	Russell, .	1901	639,536	7	¾s	200 00	333 33				
53	Avon, .	1901	909,598	9	4½	200 00	333 33	1,500 00	July 1,	Zenas A. French, Holbrook.	Patrick E. McGonnigle, Avon.
	Holbrook, .	1901	1,287,144	12	5½s	250 00	416 67				
	Randolph, .	1901	1,999,750	16	9½s	300 00	500 00				
54	Douglas, .	1901	1,187,830	12	¾	300 00	500 00	1,650 00	Sept. 1,	Leander S. Aldrich, Uxbridge.	Gilbert W. Rowley, Douglas.
	Uxbridge, .	1901	2,645,260	23	¾	450 00	750 00				
55	Erving, .	1901	873,512	7	7½s	276 32	460 53	1,500 00	Aug. 1,	Nathan J. Hunting, Shutesbury.	Jennie C. Richards, Erving.
	Leverett, .	1901	334,251	4	4½	157 89	263 15				
	Shutesbury, .	1901	220,614	3	¾s	118 42	197 37				
	Wendell, .	1901	238,375	5	9½s	197 37	328 95				

56	Lee, . . . . .	1901	1,977,739	14	$12\frac{25}{25}$	360 00	600 00	1,500 00	Sept. 1,	D. M. Wilcox, Lee,	J. J. Hassett, Lee.
	Monterey, . . . . .	1901	200,000	4	$5\frac{25}{25}$	150 00	250 00				
	Oats, . . . . .	1901	229,158	6	$5\frac{25}{25}$	150 00	250 00				
	Tyringham, . . . . .	1901	261,619	4	$5\frac{25}{25}$	90 00	150 00				
57	Hinsdale, . . . . .	1901	591,039	9	3% days.	258 62	431 04	1,500 00	May 7,	Chas. S. Galusha, Windsor.	Thomas F. Barker, Hinsdale.
	Peru, . . . . .	1901	126,168	5	1% days	129 31	215 51				
	Savoy, . . . . .	1901	178,560	7	2% days.	181 03	301 72				
	Windsor, . . . . .	1901	275,400	7	2% days.	181 04	301 73				
58	Halifax, . . . . .	1901	354,654	2	$\frac{2}{15}$	100 00	166 67	1,500 00	July 1,	John M. Monroe (Bryantville), Pembroke.	John W. Cobb, Kingston.
	Kingston, . . . . .	1901	1,501,336	12	$\frac{2}{15}$	300 00	500 00				
	Pembroke, . . . . .	1901	925,435	7	$\frac{2}{15}$	250 00	416 66				
	Plympton, . . . . .	1901	324,237	3	$\frac{2}{15}$	100 00	166 67				
59	Clarksburg, . . . . .	1902	255,292	6	$\frac{2}{15}$	250 00	416 67	1,500 00	Sept. 1,	Daniel Shephardson, Hancock.	F. C. Downing, Lanesborough.
	Hancock, . . . . .	1902	282,585	6	$\frac{2}{15}$	250 00	416 67				
	Lanesborough, . . . . .	1902	484,384	5	$\frac{2}{15}$	208 33	347 21				
	New Ashford, . . . . .	1902	52,315	1	$\frac{2}{15}$	41 67	69 45				
60	Dana, . . . . .	1902	359,920	5	$\frac{2}{15}$	208 33	347 22	1,500 00	July 1,	John H. Johnson, Dana.	Mrs. Nellie M. Brown, Dana.
	Greenwich, . . . . .	1902	277,260	2	$\frac{2}{15}$	83 33	138 89				
	New Salem, . . . . .	1902	321,510	8	$\frac{2}{15}$	291 67	486 11				
	Prescott, . . . . .	1902	181,024	5	$\frac{2}{15}$	166 67	277 78				
61	Auburn, . . . . .	1902	1,017,600	10	$\frac{2}{3}$	270 00	450 00	1,500 00	July 1,	W. T. Duvall, Auburn.	James W. Stockwell, Sutton.
	Sutton, . . . . .	1902	1,229,096	17	$\frac{2}{3}$	480 00	800 00				
62	Essex, . . . . .	1902	1,082,361	9	$\frac{2}{10}$	225 00	375 00	1,500 00	July 1,	George K. Knowlton, Hamilton.	Everett A. Smith, Hamilton.
	Hamilton, . . . . .	1902	3,138,580	8	$\frac{2}{10}$	225 00	375 00				
	Middleton, . . . . .	1905	734,590	3	$\frac{2}{10}$	150 00	250 00				
	Wenham, . . . . .	1902	2,142,300	5	$\frac{2}{10}$	150 00	250 00				
63	Carver, . . . . .	1902	1,229,455	10	$\frac{2}{10}$	300 00	500 00	1,500 00	May 1,	Mrs. Alice G. Shaw, Carver.	Chas. C. Perkins, South Carver.
	Lakeville, . . . . .	1902	639,927	6	$\frac{2}{10}$	225 00	375 00				
	Rochester, . . . . .	1902	598,630	6	$\frac{2}{10}$	225 00	375 00				
64	Millis, . . . . .	1902	741,555	7	$\frac{1}{3}$	250 00	416 67	1,500 00	Sept. 1,	Evan F. Richardson, Millis.	Edward W. Mann, Norfolk.
	Norfolk, . . . . .	1902	707,581	5	$\frac{1}{3}$	250 00	416 67				
	Westwood, . . . . .	1902	2,087,205	5	$\frac{1}{3}$	250 00	416 66				
65	Mt. Washington, . . . . .	1902	82,012	2	$\frac{6}{20}$	75 00	125 00	1,500 00	July 1,	Edwin L. Boardman, Sheffield.	Z. H. Cande, Sheffield.
	New Marlborough, . . . . .	1902	609,460	11	$\frac{20}{20}$	285 00	475 00				
	Sheffield, . . . . .	1902	928,265	13	$\frac{2}{50}$	390 00	650 00				

<sup>1</sup> Added May 16, 1905, by decree of State Board of Education.

## Union superintendents — Concluded.

Number.	UNIONS.	When formed.	Valuation May 1, 1906.	No. of schools, 1905-1906.	EACH TOWN'S SHARE OF SUPERINTENDENT'S —		State aid to each town.	Superintendent's salary.	When union superintendent began.	JOINT COMMITTEE.	
					Service.	Salary.				Chairman.	Secretary.
66	Chesterfield, . Williamsburg, . Worthington, .	1902 1902 1902	\$302,320 914,708 315,618	7 14 7	$\frac{1}{4}$ $\frac{2}{4}$ $\frac{1}{4}$	\$187 50 375 00 187 50	\$312 50 625 00 312 50	\$1,500 00	Sept. 1,	Wm. H. Baker, Chesterfield.	Mrs. Martha S. Bisbee, Williamsburg.
67	Alford, . Egremont, . Richmond, . West Stockbridge, .	1902 1902 1902 1902	157,921 459,085 339,089 382,541	2 4 6 7	$\frac{3}{22}$ $\frac{4}{22}$ $\frac{7}{22}$ $\frac{5}{22}$	102 27 136 36 236 64 272 73	170 45 227 27 397 73 454 55	1,500 00	July 1,	J. B. Briggs (Egremont), Gt. Barrington, R. F. D. No. 3.	Henry M. Bowden, South Egremont.
68	Berkley, . Dighton, . Rehoboth, .	1902 1902 1902	407,609 913,125 765,902	7 12 15	$\frac{4}{20}$ $\frac{7}{20}$ $\frac{9}{20}$	150 00 262 50 337 50	250 00 437 50 562 50	1,500 00	July 1,	Andrew W. Turner, Dighton.	Christopher C. Viall, Rehoboth.
69	Charlton, . Leicester, .	1902 1902	1,258,000 2,192,165	15 19	$\frac{1}{2}$ $\frac{1}{2}$	375 00 375 00	625 00 625 00	1,500 00	Sept. 1,	Edgar W. Preble, Charlton.	J. W. Smith, Leicester.
70	Boxborough, . Maynard, . Stow, .	1902 1902 1902	238,615 3,606,849 \$86,122	4 18 6	$\frac{2}{10}$ $\frac{5}{10}$ $\frac{3}{10}$	150 00 375 00 225 00	250 00 375 00 375 00	1,500 00	Sept. 1,	Daniel Goodenow, Maynard.	Rowland P. Harriman, Maynard.
71	Conway, . Deerfield, . Sunderland, . Whately, .	1903 1903 1903 1903	625,890 1,534,841 480,270 433,057	15 13 4 6	31 per cent. 33 per cent. 17 per cent. 13 per cent.	231 23 294 90 129 67 94 20	385 38 491 50 216 12 157 00	1,500 00	July 1,	C. G. Trow, Sunderland.	Edw. A. Rice, South Deerfield.
72	Agawam, . Ludlow, .	1903 1903	1,641,876 3,027,682	15 20	$\frac{3}{4}$ $\frac{4}{4}$	321 43 428 57	535 72 714 28	1,600 00	July 1,	Edward E. Chapman, Ludlow.	Fred A. Worthington, Agawam.
73	Granville, . Sandisfield, . Southwick, . Tolland, .	1903 1903 1903 1903	405,908 311,398 634,220 169,673	9 8 10 2	30 per cent. 25 per cent. 35 per cent. 10 per cent.	225 00 187 50 262 50 75 00	375 00 312 50 437 50 125 00	1,500 00	July 1,	Mrs. A. M. Carpenter, Granville.	Mrs. Emma L. Stow, Granville.
74	Dudley, . Webster, .	1903 1903	1,487,683 6,173,323	15 21	$\frac{1}{3}$ $\frac{2}{3}$	250 00 500 00	416 67 —	2,000 00	Aug. 1,	Spaulding Bartlett, Webster.	R. A. Dunning, Webster.

75	Billeric, Pepperell,	• •	1904 1904	2,194,026 2,236,980	16 18	$\frac{1}{2}$ $\frac{1}{2}$	375 00 375 00	625 00 625 00	1,500 00	Sept. 1,	Fred A. Casey, Bille- rica.	Edgar W. Blake, East Pepperell.
76	Belchertown, Enfield,	• •	1904 1904	864,810 693,190	19 7	$1\frac{1}{2}$ $\frac{7}{25}$	540 00 210 00	900 00 350 00	1,500 00	Sept. 1,	Henry M. Downing, Enfield.	George H. B. Green, Belchertown.
77	Boxford, Newbury, Salisbury, West Newbury,	• • • •	1905 1905 1905 1905	1,176,263 1,245,973 810,205 1,030,420	6 6 8 10	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	150 00 150 00 150 00 300 00	250 00 250 00 250 00 500 00	1,500 00	July 1,	Parker H. Nason, West Newbury.	Roy L. Eaton, Salis- bury.
78	Foxborough, Seekonk,	• •	1905 1905	2,111,871 1,084,475	16 9	$\frac{3}{4}$ $\frac{3}{4}$	450 00 300 00	750 00 500 00	1,500 00	July 1,	Prof. John F. Greene, Seekonk.	Francis A. White, Fox- borough.
79 <sup>1</sup>	Ashburnham, Winchendon,	• •	1905 1905	914,970 3,286,655	11 25	$\frac{1}{2}$ $\frac{3}{4}$	250 00 500 00	416 67 833 33	1,800 00	May 1,	Frank B. Spalter, Winchendon.	Dr. Elmer G. Fosgate, Ashburnham.
80	Merrimac, <sup>2</sup> Reading,	• •	1906 1901	1,208,685 4,818,545	11 21	$1\frac{1}{15}$ days. $3\frac{1}{15}$ days.	290 00 460 00	483 32 —	1,700 00	Sept. 1,	Walter S. Parker, Reading.	Silas L. Morse, Mer- rimac.

<sup>1</sup> Union No. 79 formed May 16, 1905, by decree of State Board of Education. <sup>2</sup> Added in 1906.

NOTE. — Of the foregoing unions, those numbered 27, 32, 50, 63 and 64 were authorized by special acts of the Legislature.

## THE REGISTRATION OF TEACHERS.

In accordance with the requirements of chapter 399, Acts of 1906 (as amended by chapter 213, Acts of 1907), the Board has received and filed applications from persons wishing positions as teachers in the public schools, and has furnished to inquiring superintendents such information as was in the possession of the office.

The number of persons who have registered is not large, — 23 in 1906 and 66 in 1907. Some of these have found places through the office, but how many there are no means of knowing, as they fail to make any returns of their engagements in spite of urgent requests to do so.

The scarcity of good teachers is now such throughout the country that a smaller number than formerly is depending upon agencies to secure employment.

The National Education Association, at its meeting in July, 1907, appointed a special committee on the shortage of teachers, and this committee is seeking information in all parts of the country as to the best methods for increasing the supply. Until the salaries of teachers bear some reasonable relation to the demands of the work and the cost of living, there is little hope that persons qualified to teach can be drawn away from the more attractive and lucrative employments which modern business furnishes.

The Board would be glad to extend the usefulness of this department of its work. It has offered its services by public announcements at teachers' institutes and elsewhere, and it seeks the co-operation of all interested persons in making the registry of substantial benefit both to the employers and the employed.

## THE WORK OF THE AGENTS.

In the Appendix will be found the individual reports of the four agents of the Board.

The report of Dr. Prince deals with the special schools which he has continued to visit to acquire information and to give advice, which is as far as the authority of the Board goes.

Mr. MacDonald has continued his high school visitation, which is required in order that the Board may have information on which to base its approval for the State grants.

Mr. Warren's field is especially in the rural schools, more particularly in those of the western part of the State.

Mr. Burnham reaches as far as possible the supervisors and teachers of drawing in all parts of the State.

All these officers find their most fruitful field of effort in guiding and assisting the local superintendents. Before supervision was general, the agents of the Board came directly into contact with school committees and teachers, and by visitation and conference were able to make themselves useful; but their usefulness was limited by the comparative infrequency of their visits. It was a common occurrence in the smaller towns for an agent to find that all the teachers had changed, and sometimes all the committee, since his last visit.

The training of teachers was impossible under such conditions. This is the chief reason for being of the present system of local supervision, and only as it succeeds in improving the teaching is the system worth retaining. The schools were run under the old system, and they would be continued were the superintendents to be withdrawn; but the vital element — teachers carefully selected and inspired to growth in culture and in skill — can only be secured by superintendents who are themselves persons of culture, and who have in them the power to inspire.

It is to find such superintendents that the examinations by the Board are held. It is to encourage the men who have these qualifications and to stimulate to growth those who lack them that the agents visit and confer and counsel.

While the Board is not in as close touch with particular schools and teachers as formerly, it is able to exert a wider and more continuous influence than ever before.

All of the agents have given special thought this year to the question of industrial education as related to the various grades of public schools, and their reports will be found to contain some valuable suggestions on this subject.

Respectfully submitted,

GEORGE H. MARTIN,  
*Secretary of the Board.*





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# FINANCIAL STATEMENTS.

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## THE MASSACHUSETTS SCHOOL FUND.

The following statement shows the condition of the Massachusetts school fund : —

Amount of fund Jan. 1, 1907, . . . . .	\$4,980,110 66
Increase of fund during the year, under the provisions of chapter 90, Resolves of 1894, . . . . .	19,889 34
Amount of fund Dec. 31, 1907, . . . . .	\$5,000,000 00
Gross income for 1907, . . . . .	\$230,557 76
Paid for accrued interest on securities purchased, . . . . .	1,936 54
Net income, . . . . .	\$228,621 22
Retained from the distribution of January, 1907, and added to the income in January, 1908, . . . . .	500 00
Paid to towns in the distribution of Jan 25, 1908, . . . . .	\$229,121 22

The following table shows the amount of the principal of the Massachusetts school fund and the annual income from 1894 to 1907 : —

YEAR.	Principal.	Income.
1894, . . . . .	\$3,770,548 14	\$167,210 54
1895, . . . . .	3,870,548 14	172,729 65
1896, . . . . .	3,970,548 14	175,165 64
1897, . . . . .	4,070,548 14	189,808 71
1898, . . . . .	4,170,548 14	204,612 61
1899, . . . . .	4,270,548 14	208,462 61
1900, . . . . .	4,370,548 14	213,066 18
1901, . . . . .	4,470,548 14	366,656 51
1902, . . . . .	4,570,548 14	220,731 77
1903, . . . . .	4,670,548 14	197,379 93
1904, . . . . .	4,780,110 66	211,325 58
1905, . . . . .	4,880,110 66	219,379 32
1906 (eleven months), . . . . .	4,980,110 66	224,468 31
1907, . . . . .	5,000,000 00	228,621 22

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION.

## APPROPRIATIONS FOR THE SUPPORT OF NORMAL SCHOOLS.

Dr

Cr.

1906-07.		1906-07.	
Expended for Bridgewater Normal School, . . . . .	\$48,990 94	Appropriation (chapter 52, Acts of 1907), . . . . .	\$322,504 00
Expended for Fitchburg Normal School, . . . . .	42,514 81	Received from the city of Fitchburg, . . . . .	11,624 82
Expended for Framingham Normal School, . . . . .	35,167 54		
Expended for Hyanis Normal School, . . . . .	22,869 80		
Expended for Lowell Normal School, . . . . .	31,475 00		
Expended for North Adams Normal School, . . . . .	30,930 68		
Expended for Salem Normal School, . . . . .	33,223 50		
Expended for Westfield Normal School, . . . . .	30,846 60		
Expended for Worcester Normal School, . . . . .	26,032 89		
Expended for Normal Art School, . . . . .	31,915 91		
Balance unexpended, . . . . .	161 15		
	\$334,128 82		\$334,128 82
Bridgewater Normal School:—		Appropriation (chapter 52, Acts of 1907), . . . . .	\$48,991 00
Salaries, . . . . .	\$27,858 40		
Model school, . . . . .	7,569 58		
Wages and labor, . . . . .	5,260 00		
Buildings and grounds, . . . . .	6,218 01		
School supplies, . . . . .	1,749 96		

Miscellaneous, . . . . .	334 99		
Balance unexpended, . . . . .	06	\$48,991 00	\$48,991 00
Fitchburg Normal School :—			
Salaries, . . . . .	\$13,150 00		Appropriation (chapter 52, Acts of 1907), . . . . . \$30,890 00
Model school, . . . . .	15,402 17		Received from city of Fitchburg, . . . . . 11,624 82
Wages and labor, . . . . .	4,887 50		
Buildings and grounds, . . . . .	6,675 39		
School supplies, . . . . .	1,631 30		
Lectures, etc., . . . . .	500 00		
Miscellaneous, . . . . .	268 45		
Balance unexpended, . . . . .	01	\$42,514 82	\$42,514 82
Framingham Normal School :—			
Salaries, . . . . .	\$17,299 41		Appropriation (chapter 52, Acts of 1907), . . . . . \$35,178 00
Model school, . . . . .	5,042 75		
Wages and labor, . . . . .	4,563 38		
Buildings and grounds, . . . . .	6,649 89		
School supplies, . . . . .	1,223 69		
Lectures, etc., . . . . .	73 43		
Miscellaneous, . . . . .	314 99		
Balance unexpended, . . . . .	10 46	\$35,178 00	\$35,178 00
Hyannis Normal School :—			
Salaries, . . . . .	\$11,870 54		Appropriation (chapter 52, Acts of 1907), . . . . . \$22,870 00
Model school, . . . . .	2,743 88		
Wages and labor, . . . . .	2,423 87		
Amount carried forward, . . . . .	\$17,038 29		Amount carried forward, . . . . . \$22,870 00

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONTINUED.

Dr.

APPROPRIATIONS FOR THE SUPPORT OF NORMAL SCHOOLS — *Continued.*

Cr.

1906-07.	<i>Amount brought forward,</i>	1906-07.	<i>Amount brought forward,</i>
	<i>Hyannis Normal School — Con.</i>		
	Buildings and grounds, . . .	\$17,038 29	
	School supplies . . .	4,122 18	
	Lectures, etc., . . .	787 87	
	Miscellaneous, . . .	80 57	
	Balance unexpended, . . .	840 89	
		20	\$22,870 00
	<i>Lowell Normal School : —</i>		
	Salaries, . . .	\$16,021 81	Appropriation (chapter 52, Acts of 1907), . . . . .
	Model school, . . .	6,675 51	
	Wages and labor, . . .	2,851 66	
	Buildings and grounds, . . .	3,343 77	
	School supplies, . . .	1,900 91	
	Lectures, etc., . . .	410 83	
	Miscellaneous, . . .	270 51	\$31,475 00
	<i>North Adams Normal School : —</i>		
	Salaries, . . .	\$15,821 86	Appropriation (chapter 52, Acts of 1907), . . . . .
	Model school, . . .	4,045 55	
	Wages and labor, . . .	3,201 97	
	Buildings and grounds, . . .	5,830 73	
	School supplies, . . .	1,368 45	
	Lectures, etc , . . .	274 84	
	Miscellaneous, . . .	387 28	
	Balance unexpended, . . .	123 32	\$31,054 00

Salem Normal School: —					
Salaries, . . . . .	\$20,091 67			Appropriation (chapter 52, Acts of 1907), . . . . .	\$33,225 00
Model school, . . . . .	3,162 47				
Wages and labor, . . . . .	2,906 14				
Buildings and grounds, . . . . .	3,635 93				
School supplies, . . . . .	2,629 63				
Lectures, . . . . .	201 00				
Miscellaneous, . . . . .	596 66				
Balance unexpended, . . . . .	1 50		\$33,225 00		\$33,225 00
Westfield Normal School: —					
Salaries, . . . . .	\$12,591 63			Appropriation (chapter 52, Acts of 1907), . . . . .	\$30,850 00
Model school, . . . . .	5,849 18				
Wages and labor, . . . . .	3,558 97				
Buildings and grounds, . . . . .	5,149 19				
School supplies, . . . . .	3,176 87				
Lectures, etc., . . . . .	239 67				
Miscellaneous, . . . . .	281 09				
Balance unexpended, . . . . .	3 40		\$30,850 00		\$30,850 00
Worcester Normal School: —					
Salaries, . . . . .	\$16,199 76			Appropriation (chapter 52, Acts of 1907), . . . . .	\$26,045 00
Model school, . . . . .	2,406 88				
Wages and labor, . . . . .	1,705 74				
Buildings and grounds, . . . . .	3,213 69				
School supplies, . . . . .	1,983 01				
Lectures, etc., . . . . .	53 00				
Miscellaneous, . . . . .	470 81				
Balance unexpended, . . . . .	12 11		\$26,045 00		\$26,045 00

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONTINUED.

Dr.

APPROPRIATIONS FOR THE SUPPORT OF NORMAL SCHOOLS — *Concluded*.

Cr.

1906-07.	Normal Art School:—		1906-07.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$31,926 00
	Salaries, . . . . .	\$25,300 44.			
	Wages and labor, . . . . .	2,783 53			
	Buildings and grounds, . . . . .	2,568 00			
	School supplies, . . . . .	346 72			
	Lectures, etc., . . . . .	650 00			
	Miscellaneous, . . . . .	267 22			
	Balance unexpended, . . . . .	10 09			
					\$31,926 00

## APPROPRIATION FOR SALARIES.

1907.			1907.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$17,060 00
	George H. Martin, secretary, . . . . .	\$4,500 00			
	John T. Prince, agent, . . . . .	2,500 00			
	J. W. MacDonald, agent, . . . . .	2,500 00			
	G. T. Fletcher, agent, . . . . .	208 34			
	J. E. Warren, agent, . . . . .	2,291 66			
	F. L. Burnham, agent, . . . . .	2,291 66			
	A. C. Blake, chief clerk, . . . . .	1,000 00			
	E. E. Elwell, clerk, . . . . .	900 00			
	George H. Varney, . . . . .	655 00			
	Balance unexpended, . . . . .	213 34			
					\$17,060 00



## APPROPRIATION FOR TRAVELLING EXPENSES OF AGENTS.

1906-07.		1906-07.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$2,000 00
	Paid John T. Prince, . . . . .	\$339 42		
	J. W. MacDonald, . . . . .	429 05		
	G. T. Fletcher, . . . . .	21 27		
	J. E. Warren, . . . . .	457 10		
	F. L. Burnham, . . . . .	312 35		
	Balance unexpended, . . . . .	440 81		
		\$2,000 00		\$2,000 00

## APPROPRIATION FOR AID TO NORMAL SCHOOL PUPILS.

1907.		1907.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$4,000 00
	Amounts paid : —			
	Bridgewater Normal School, . . . . .	\$610 40		
	Fitchburg Normal School, . . . . .	90 90		
	Frammingham Normal School, . . . . .	181 81		
	Hyannis Normal School, . . . . .	77 92		
	Lowell Normal School, . . . . .	38 96		
	North Adams Normal School, . . . . .	103 90		
	Salem Normal School, . . . . .	168 85		
	Westfield Normal School, . . . . .	662 33		
	Worcester Normal School, . . . . .	64 93		
	Balance unexpended, . . . . .	2,000 00		
		\$4,000 00		\$4,000 00

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONTINUED.

DR.

## APPROPRIATION FOR TEACHERS' INSTITUTES.

CR.

1906-07.		1906-07.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$2,000 00
	Paid for instructors and expenses of institutes at Wakefield, Lexington, Worcester, Hopedale, Spencer, Marlborough, Monson, Hinsdale, Great Barrington, Millis, Marion, Belchertown, Williamsburg, Deerfield, Charle- mont, Vineyard Haven, Webster, Gardner, Orleans, Bourne, and Ayer, . . . . .	\$1,814 55 185 45		
	Balance unexpended, . . . . .			\$2,000 00

## APPROPRIATION FOR INCIDENTAL EXPENSES.

1907.		1907.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$2,000 00
	Amounts paid for: —			
	Printing school laws, . . . . .	\$283 50		
	Other printing, . . . . .	294 01		
	Preparing indexes, . . . . .	271 75		
	Postage, . . . . .	244 70		
	Expressage, . . . . .	332 58		
	Stationery, . . . . .	88 20		
	Books and periodicals, . . . . .	41 85		
	Advertising, . . . . .	46 60		
	Telephone, . . . . .	21 17		

Binding, . . . . .	20 50		
Clippings, . . . . .	10 98		
Balance unexpended, . . . . .	344 16		
		\$2,000 00	\$2,000 00

## APPROPRIATION FOR EXPENSES OF MEMBERS OF THE BOARD.

1907.	1907.	1907.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$1,000 00
Amounts paid : —				
Jan. 22, C. Q. Richmond, . . . . .	\$49 27			
Feb. 13, A. E. Winship, . . . . .	12 32			
Apr. 17, Ella L. Cabot, . . . . .	7 15			
June 11, C. Q. Richmond, . . . . .	73 34			
July 3, Kate Gannett Wells, . . . . .	29 38			
8, F. F. Murdock, visitation of schools, . . . . .	270 50			
Nov. 20, Ella L. Cabot, . . . . .	12 46			
27, Kate Gannett Wells, . . . . .	15 40			
29, J. D. Miller, . . . . .	25 30			
Dec. 9, George I. Aldrich, . . . . .	91 10			
A. E. Winship, . . . . .	21 31			
Balance unexpended, . . . . .	392 47	\$1,000 00		\$1,000 00

## APPROPRIATION FOR EDUCATION OF ADULT BLIND.

1907.	1907.	1907.	Appropriation (chapter 52, Acts of 1907), . . . . .	\$5,000 00
Expended for teachers and their travelling expenses, . . . . .	\$4,910 12			
Balance unexpended, . . . . .	89 88	\$5,000 00		5,000 00

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONTINUED.

Dr.

## APPROPRIATION FOR REGISTERS AND BLANKS.

Cr.

1907.			1907.	Appropriation (chapter 52, Acts of 1907), Deficiency, . . . . .	\$1,200 00 163 56
	Paid for registers, for census blanks, . . . . . for blanks for returns, . . . . . for stationery, . . . . . for expressage, . . . . .	\$885 51 262 43 86 94 12 52 116 16			\$1,363 56
					\$1,363 56

## APPROPRIATION FOR MEDICAL INSPECTION.

1907.			1907.	Balance brought over, Appropriation (chapter 52, Acts of 1907), Deficiency, . . . . .	\$576 77 500 00 110 31
	Paid for printing, . . . . . for expressage, . . . . . for postage, . . . . .	\$1,044 50 122 58 20 00			
					\$1,187 08
					\$1,187 08

## APPROPRIATION FOR EDUCATION OF DEAF CHILDREN.

1907.			1907.	Appropriation (chapter 52, Acts of 1907), Deficiency, . . . . .	\$91,000 00
Jan. 3,	Amounts paid as follows: — Sarah Fuller Home: 11 pupils, quarter commencing Oct. 1, 1906, . . . . .	\$574 94			
28,	Boston School: 97 pupils, half year ending Jan. 31, 1907, . . . . .	11,388 96			

Feb. 13,	Clarke School :		
	108 pupils, quarter ending		
	March 31, 1907, . . . .	7,962 50	
Mar. 20,	Horace Mann School :		
	146 pupils, half year ending		
	July 1, 1907, . . . .	8 981 34	
	Transportation to Feb 15, 1907,	1,000 46	
Apr. 2,	American School :		
	54 pupils, quarter beginning		
	March 1, 1907, . . . .	3,375 00	
	1 pupil, quarter beginning Dec.		
	1, 1906, . . . .	62 50	
6,	Clarke School :		
	108 pupils, quarter ending		
	June 30, 1907, . . . .	7,962 50	
11,	Sarah Fuller Home :		
	10 pupils, quarter ending April		
	1, 1907, . . . .	612 50	
	Sarah Fuller Home :		
	Classes for defective speech, .	107 00	
June 8,	American School :		
	54 pupils, quarter beginning		
	June 1, 1907, . . . .	3,375 00	
	Horace Mann School :		
	Travelling expenses, Feb. 15		
	to May 15, 1907, . . . .	1,021 26	
20,	Boston School :		
	99 pupils, half year ending		
	June 19, 1907, . . . .	11 847 29	
	<i>Amount carried forward, . .</i>	<u>\$58,271 25</u>	
	<i>Amount carried forward, . .</i>		<u>\$91,000 00</u>



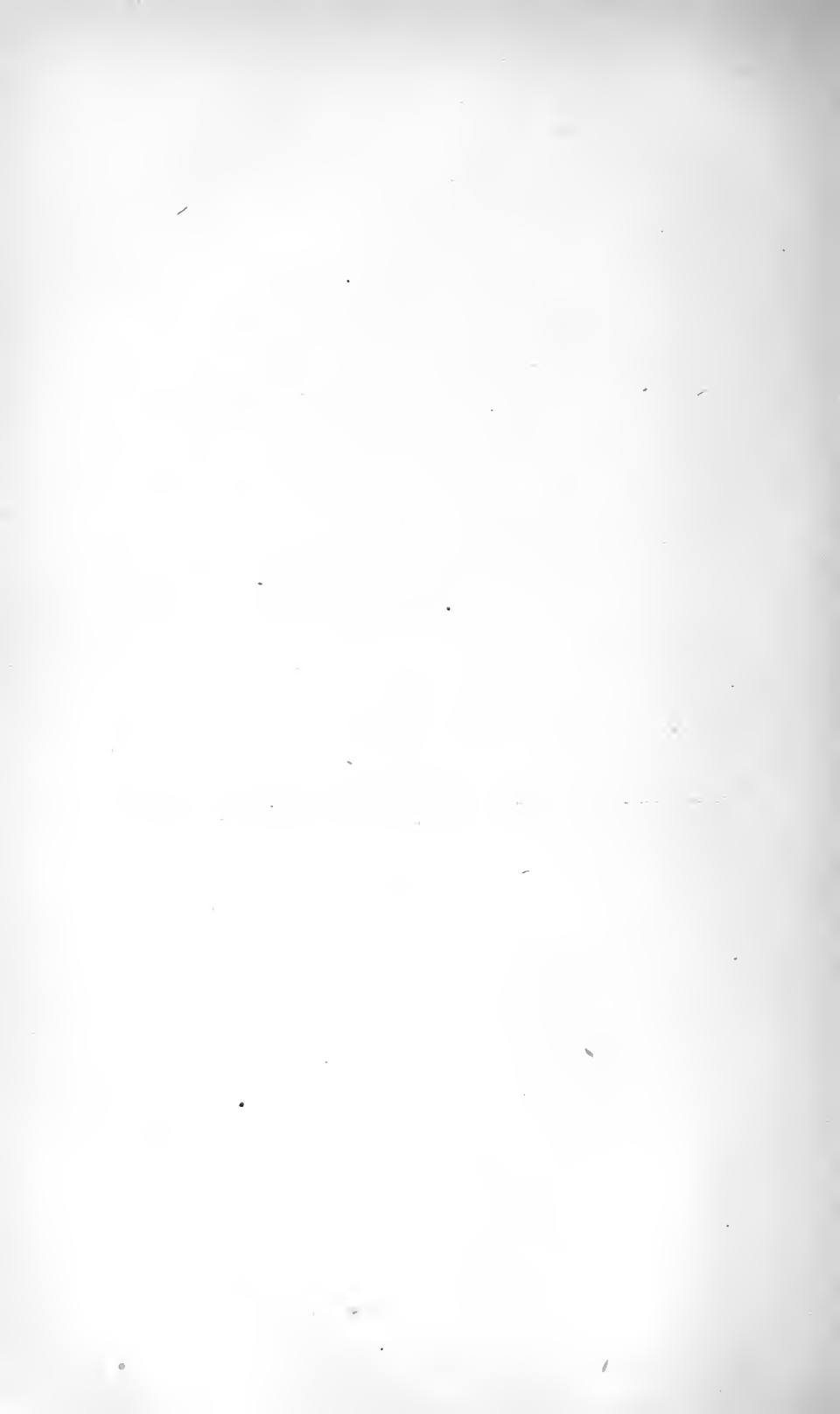
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## APPENDICES.

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APPENDIX A.

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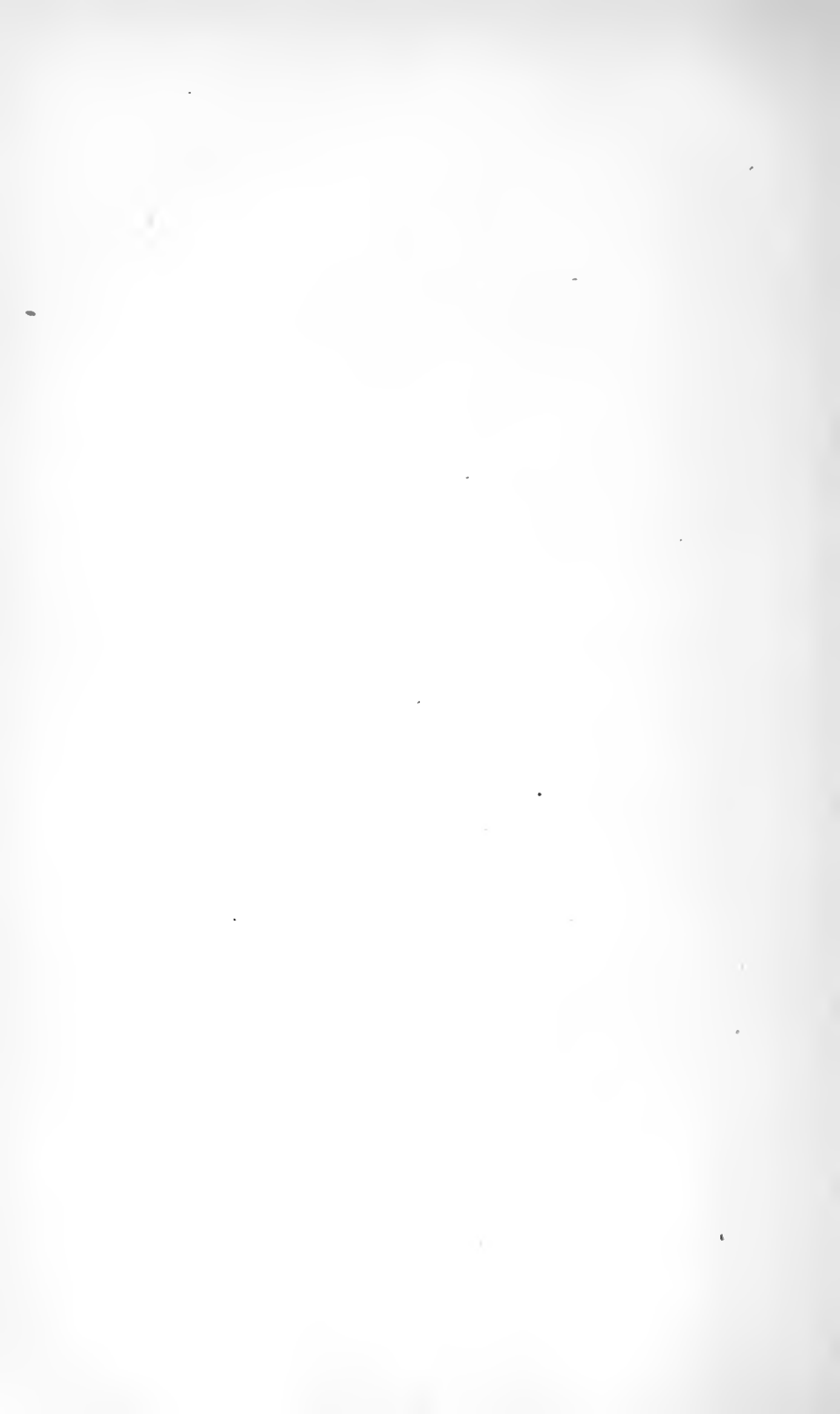
REPORT OF JOHN T. PRINCE,

AGENT OF THE BOARD.

EDUCATIONAL CONDITIONS, SCHOOL INCENTIVES, TIME LIMITS AND  
SCHOOL SESSIONS, INDUSTRIAL TRAINING IN ELEMENTARY  
SCHOOLS, SCHOOL FURNISHINGS AND REPAIRS,  
SPECIAL CLASSES FOR DELINQUENTS  
AND DEFECTIVES, SCHOOLS  
FOR TRUANTS.

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# REPORT.

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*To the Board of Education.*

My time during the past year has been given mainly to the inspection of schools of all kinds in various sections of the Commonwealth, to attendance upon teachers' institutes and other educational meetings, and to an inspection of the county truant schools and of the special schools for defectives and delinquents supported partly or wholly by the State.

## EDUCATIONAL CONDITIONS.

*State Aid.* — In my last report I spoke at some length (1) of the great improvement which had been made in the smaller towns of the Commonwealth on account of skilled supervision, made universal and obligatory by law, and (2) of the improved character of the teaching force, made possible to many towns by increased aid from the State. I also spoke of the unequal and in some respects unfair distribution of the State school fund, showing that while a few towns were receiving more money from the State than they could use to advantage, many of the towns were left without the assistance which they needed to secure trained teachers. My observation during the past year has confirmed me in all these impressions.

The benefits of increased aid have been so marked in the case of some towns that the wisdom of a further or wider extension of assistance should no longer be questioned, at least up to the point of giving aid to those towns which tax themselves for schools to the utmost, and which nevertheless are not able to employ the best teachers. The greatest need of State aid is by no means confined to the smaller towns; indeed, in many cases the smaller towns are now better off than larger ones of low valuation. To make clearer my meaning I will cite the case of two towns of a superintendency union recently visited. The

smaller of the towns has 6 schools and about 125 pupils, — the teachers receiving from \$10 to \$12 a week. The larger town has about 550 pupils, with 19 teachers, who receive an average of about \$9 a week. And yet these two towns receive practically the same amount of aid from the State.

It is true that in this instance the smaller town's local school tax is relatively more than that of the larger town, — a fact which should be considered in an equitable division of the State school fund. But that this principle is not sufficiently considered in all cases may be shown by such an example as Middlefield, in Hampshire County, which raises but \$6.25 per pupil for schools, and which receives more from the State than the adjoining town of Chester, which raises \$15.77 per pupil, and this in spite of the fact that the latter town has nearly twice as many schools as the former.

What is needed is a larger State school fund, and such a distribution of it that all the towns will be able, without a burdensome local tax, to pay the teachers a fair living salary. At present there are many teachers in the public schools who receive less for their service than factory operatives receive or girls in domestic service. From the returns of 1906-07 it appears that there are 41 towns in which the average salary of teachers is less than \$9 a week, and 9 towns in which the average salary is less than \$8 a week. It should be impossible in an enlightened Commonwealth for such meager salaries to be paid to teachers, or for teaching service to be demanded which is rated at so low a value. A law might be passed binding towns to pay teachers for full-time service at least \$10 a week, and making the financial conditions such that this limit can be met by the poorest towns without undue burden.<sup>1</sup>

*Normal Graduates.* — During the past year there has been a relative increase in the number of normal graduates employed as teachers in the public schools, the increase in the number of

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<sup>1</sup> According to a statement recently received from the office of the Commissioner of Education, laws relating to the minimum salaries of public school teachers have been passed in Indiana, Maryland, New Jersey, North Carolina, North Dakota, Ohio, Pennsylvania and West Virginia.

In Pennsylvania the law provides that the salary of teachers in districts receiving State appropriation shall not be less than \$50 a month when the teacher holds a professional, permanent or normal school certificate, has had two years' practice and presents a certificate of proficiency from his superintendent. For all teachers holding certificates of less grade the minimum salary shall be \$40. — Laws of Pennsylvania, 1907, No. 249.

such graduates over last year being  $3\frac{1}{2}$  per cent., while the increase in the number of teachers required was only 2 per cent. It is gratifying to know that this increase of trained teachers, though small, is greater than the average yearly increase of such teachers during the past ten years. If we look closely, to see where the professionally trained teachers go, we find that they go largely to the cities and larger towns rather than to those places that need them most. This fact is an added reason for increasing the salaries of teachers in towns not able at present to secure the services of normal graduates.

#### SCHOOL INCENTIVES.

One evidence of the professional advance of teachers has been the gradual lessening of a reliance upon artificial means of securing the interest and attention of pupils to the work of the schools. This is especially noticeable in respect to the misuse of examinations, and to the marking and ranking of pupils. A generation ago it was not uncommon to find examinations for promotion in all grades of graded schools. Teachers also at that time were frequently found marking the daily recitations of their pupils, and seating them at the end of every month according to their rank in the class. But all this has changed; so much so that there remain but few places where examinations alone count for promotion in the grades, or where teachers of grammar schools are expected or allowed to mark the daily recitations of their pupils. The matter appears to be somewhat different in a large number of high schools. In these schools examinations and marks seem to be authorized, or else are permitted without protest.

The difference of attitude on the part of these two classes of teachers towards examinations and marks may be accounted for in part by the fact that there are more professionally trained teachers in the grammar schools than in the high, and possibly also by the fact that the college influence and practice is felt less in one class of schools than in the other. But whatever the cause of the difference of practice the fact remains that many of the best teachers in all grades of schools are able to teach and train well without the use of artificial stimulants of any kind.

My chief purpose for referring to the matter of incentives

at this time is to call attention to what appears to be a renewal of earlier practices on the part of a few young teachers and superintendents in relation to examinations for promotion and daily marking, and to present in brief form some reasons why these practices are detrimental to the highest interests of the pupils.

In the first place there are certain analogies between feeding and training the body and feeding and training the mind which it is useful for all to consider who have anything to do with educating the young. What shall we say of the use of stimulants as a means of awakening activity? We know that the body in a normal state does not need them. No more does the mind. The mind no less than the body has in health a natural hunger for that which it most needs. If the taste in either case has not been perverted there will be no need of any artificial stimulant to insure a ready and glad reception of the food offered so long as the food is of the right kind and is properly presented. Indeed, artificial stimulants tend to destroy a natural appetite and to interfere with processes of digestion. By inducing the pupils to work for high marks or prizes there is seemingly an increase of interest, but it is not a direct interest in the subject-matter studied. There is acquired, instead, a habit of working only under stress of competition or of a position of distinction in the class.

Another objection to the marking of daily recitations is the danger of doing violence to the pupil's sense of justice, whether the mark is one of credit for actual achievement or a mark for effort. Pupils differ so in their powers that what may stand as a mark of credit to one pupil may be a mark of discredit to another, and no teacher can possibly measure by marks the degree of effort which any pupil may make.

Besides all this, a teacher is kept from giving proper attention to the presentation of a lesson, or to questioning, if his mind is absorbed in estimating the value of each pupil's performance.

A recent instance of the folly of marking the recitation of pupils comes to mind. Two divisions of a ninth grade in history were put in competition for a month at a time, each pupil's daily recitation being marked by the teacher. The questions

were written upon the blackboard, and framed in such a way as to permit the answers to be easily marked. There was a certain kind of interest excited in this contest, but the interest could hardly be said to be historical. In this case — girls against boys — it was partly, at least, an interest in seeing which sex would win, and partly, perhaps, in trying to get the promised extra hour of freedom at the end of the month.

Examinations for promotion or for reports to parents, when given by some one other than the teacher, are attended by results which are, perhaps, less harmful to individual pupils than to the quality of the teaching as a whole. To be entirely fair the examiner feels obliged to confine his questions largely to the material found within certain limits of the regular text-book. The teacher takes note of this fact and governs himself accordingly. The result is memoriter and text-book grind of the worst kind. I recall a marked instance of work of this kind in a suburban grammar school some time ago. The subject was geography, and the lesson was a portion of a page recited over and over by the pupils, largely in the words of the book. When I asked the teacher if she thought that was a proper way to teach the subject, she replied: "No, I do not; but there is an examination in the subject every month by the principal, and the results reported to the school board determine the promotion of the pupils. I have reason to believe that a teacher's retention depends upon the results of these examinations, and as I have a family to support I do not propose to run any risks." Who could, under the circumstances, blame that teacher for poor work?

Examinations may have their place and perhaps marking and reporting have their place, but when they tend to prevent pupils from thinking for themselves, or force the pupils to dislike the subject studied, and especially when they divert the interest of the pupils from the real ends of the subjects studied, they should be forever banished from the school.

#### TIME LIMITS AND SCHOOL SESSIONS.

Difficulties of a serious nature are found to exist in making a course of studies under present conditions. Over and over again we hear the criticism that the schools teach nothing thor-

oughly, and as frequently we hear the defence from school authorities that there is no time to do more. It is plain to see how the difficulty has arisen. Fifty years ago but four or five subjects were taught in the schools, and there were six hours a day to teach them in, with an extra half day on Saturday. Later, the half-day session on Saturday was given up, and the time of the afternoon session was reduced to two hours. Then came the giving up of recesses and an earlier closing in consequence. In the mean time, the number of subjects doubled and trebled, but the length of session remained as before, even with the restoration of recesses. Thus it is that in many places all the exercises of the school, including physical exercises and recesses, are crowded into daily sessions which occupy only four and three-quarters hours of time. Even this time is shortened in some places by having only a forenoon session, leaving the afternoon free for home study and recreation.

Under such circumstances it is no wonder that it is found difficult to make a place in the program for industrial training, which is now demanding admittance into the school, and which, from the nature of the subject, must inevitably consume much time.

I can see no way out of the difficulty except by considerably lengthening the school sessions. If exercises in manual or industrial training are to be given daily, as many wise educators advocate, and if more time is to be given to the plays and games of children, the school day should be increased to six hours. That this time is not unreasonable, and that it can be easily brought about, with the hearty approval of parents and pupils, is shown by the experience of one of our own normal practice schools. When from experience the desirability of having industrial work in all grades became manifest to all concerned, the plan of prolonging the daily sessions one hour was proposed, and with practical unanimity it was cordially approved by the patrons of the school. At first, attendance upon the industrial exercises was optional, but as a matter of fact nearly every pupil chose to attend, until now both the extended time and enlarged program are accepted by all without question. In some such way as this the introduction into the course of new and desirable subjects of study may be made.



Several inquiries have come to me recently as to standards of time for each study of the school. In a special report upon a course of studies a few years ago, I made a careful study of conditions and practices in various sections of this and other countries, and as a result I suggested certain approximate percentages of time to be given to each of five groups of studies. The following table is a revision of the percentages given in that report, due allowance being made for the introduction of industrial training:—

*Table showing the approximate percentage, in a proposed course of studies, of the entire recitation time of a pupil or group of pupils spent in I. Language (including reading, writing, spelling, composition, English grammar and literature and a foreign language), II. Mathematics (including arithmetic, algebra, geometry and bookkeeping), III. Elementary science (including nature study, physiology, hygiene and geography), IV. History (including civil government, biography and history proper), V. Miscellaneous Exercises (including singing, drawing and manual training).*

GROUPS OF STUDIES.	Sub- pri- mary.	Grade 1.	Grade 2.	Grade 3.	Grade 4.	Grade 5.	Grade 6.	Grade 7.	Grade 8.
I. Language, . . . .	30	40	40	35	30	25	25	25	25
II. Mathematics, . . .	5	10	10	15	15	15	15	15	15
III. Science, . . . .	20	10	10	15	15	20	20	15	15
IV. History, . . . .	10	10	10	10	15	15	15	20	20
V. Miscellaneous, . . .	35 <sup>1</sup>	30	30	25	25	25	25	25	25

<sup>1</sup> Including opening exercises, physical exercises, games, singing, drawing and construction work.

The following table gives the number of minutes weekly which may be given to each group of subjects, using the previous table of percentages as a basis, and allowing six hours for the school day:—

*Time program, showing the number of minutes a week spent in recitation by a pupil or group of pupils in five groups of subjects; also the number of minutes a week given to opening exercises and recesses and to study in school.*

GROUPS OF STUDIES.	Sub- pri- mary. <sup>1</sup>	Grade 1.	Grade 2.	Grade 3.	Grade 4.	Grade 5.	Grade 6.	Grade 7.	Grade 8.
I. Language, . . . .	360	608	608	539	462	390	390	390	390
II. Mathematics, . . .	60	152	152	231	231	234	234	234	234
III. Science, . . . .	240	152	152	231	231	312	312	234	234
IV. History, . . . .	120	152	152	154	231	234	234	312	312
V. Miscellaneous, . . .	420 <sup>2</sup>	456	456	385	385	390	390	390	390
Opening exercises, physical exercises and recesses, .	—	280	280	260	260	240	240	240	240
Total school time, . . .	1,200	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Study, <sup>3</sup> . . . .	—	425	425	440	440	450	450	450	450

<sup>1</sup> Figures in this column indicate the number of minutes spent in recitation and seat work taken together.

<sup>2</sup> Including opening exercises, physical exercises, games, singing, drawing and construction work.

<sup>3</sup> The time for study is given upon the supposition that in some subjects the class is divided into two sections, one section studying while the other section is reciting.

The above table is given upon the presumption that the school day is divided into two sessions of equal length. For some reasons it might be well to put the more intellectual studies into a morning session of four hours, and all the music, drawing and industrial training into an afternoon session of two hours. Time for a study period might also be given in the afternoon. In some communities it might be desirable to make attendance upon this short afternoon session optional. But the program made up in the way proposed would be so attractive that few would deny themselves the privilege of attending.

### INDUSTRIAL TRAINING.

*Scope.* — The term industrial training is used in different ways by speakers and writers. By some it is used simply as manual training, which generally includes, as the name indicates, only hand training in such work as sloyd, whittling, sewing and cardboard construction. Some persons mean by industrial training that training which directly prepares one for a

vocation or trade, — a training which is intended to take the place of the old time apprentice work, now well nigh abandoned. So interpreted, the term industrial training would not essentially differ from what we commonly mean by vocational training, or the training which is acquired in ordinary trade schools.

The term industrial training should, I believe, have a far wider application than to mere handwork or to preparation for a trade. It should apply to all that is done in the school or elsewhere to promote industrial efficiency and a true spirit of service. With this view the industrial training of the elementary school is as important as the subsequent training carried on in the direct interests of a vocation. Indeed, the broader training may be more important, because by it all classes of children are reached, and the dangers of too early specialization are voided. Much as we may learn from European practices along industrial lines of training, it will be worse than folly to assume, in making our programs, as they do in some parts of Europe, that the vocation of the man or woman is fixed in early childhood, and that therefore a certain kind of training will be provided for one class of children and a quite different kind for another class. We boast of the privileges of opportunity offered to immigrants from abroad. We should be equally considerate of our children. The earliest age at which the boy or girl needs to make a choice of vocation, which will be in any way a guide for training, is fourteen years; and even for two years after that time the training should not be such as to prevent a change of vocational purpose and a consequent change of training.

In another respect I believe we should not follow too closely European practices. The choice is given us in industrial training of making the shop the center of interest and effort, or of making the school the center. I believe that up to the age of eighteen years at least the youth's interests, vocational and cultural, will be best served if he makes the school the center rather than the shop. The making of the man is of far greater importance than the making of the workman, although it is true that that which makes the best workman frequently makes the best man. The likelihood of success, however, in reaching both of these desirable ends is, I believe, greater for the industrialized pupil than for the schooled apprentice. This does not mean

that there should not be a close correlation of industrial and cultural studies in the high school, nor that the center of correlation should not be industrial work. Nor does it mean that trade schools and courses should not be provided for the special aid of workmen of every kind. It means only that, instead of sending our boys and girls into shops with the expectation that they will supplement their work by study, we shall provide for them industrial and commercial high schools and courses, such that while they are fitting themselves to become efficient workers in some useful calling they can take at the same time studies that will help them to become intelligent citizens and useful members of society.

Industrial training as thus interpreted begins early, and continues somewhat the same for all pupils up to the age of fourteen years. After that time special training may be given along lines which will best prepare them for vocational service.

*Extent and Kinds.* — In the sixty-ninth report of the Board of Education, pages 97–103, there were given the names of the cities and towns in the Commonwealth which were giving instruction in some forms of manual training in high and grammar schools. Recent returns from superintendents show that the work has been increased and extended in some of the places, and that it has been introduced in many others. The list of cities and towns in which instruction in manual training is now maintained is as follows: —

*Cities and Towns maintaining Instruction in Manual Training.*

[NOTE.—“G” at the right of the names means grammar schools, “H” means high schools and “E” means evening schools.]

*List A.*

Boston, G, H, E.  
 Brockton, H.  
 Brookline, G, H, E.  
 Cambridge, G, H, E.  
 Chelsea, G, H.  
 Fall River, H.  
 Fitchburg, G, H.  
 Haverhill, G, H.  
 Holyoke, H.  
 Lawrence, G, H.  
 Lowell, G, H, E.  
 Lynn, G, H, E.

Malden, G, H.  
 New Bedford, G, E.  
 Newton, G.  
 North Adams, G.  
 Quincy, G, H.  
 Salem, G, H.  
 Somerville, G, H.  
 Springfield, G, H, E.  
 Taunton, G, H.  
 Waltham, G, H.  
 Worcester, G, H, E.

*List B.*

Amherst, G.	Melrose, G.
Andover, G. H.	Milton, G. H.
Arlington, G. H.	Methuen, G.
Athol, G.	Montague, G.
Attleborough, G.	Nantucket, G. H.
Ayer, G.	Natick, G. H.
Bedford, G.	Needham, G.
Belmont, G.	Northfield, G.
Beverly, G. H.	Plymouth, G.
Braintree, G.	Petersham, G. H.
Concord, G. H.	Princeton, G. H.
Dedham, G.	Reading, G.
Easton, G.	South Hadley, G.
Everett, G.	Stoneham, G.
Fairhaven, G. H.	Swampscott, H.
Framingham, G.	Wakefield, G.
Gardner, G. H.	Walpole, G.
Great Barrington, G.	Ware, G.
Greenfield, G.	Watertown, G.
Hopkinton, G. H.	Wellesley, G. H.
Hyde Park, G.	West Boylston, G.
Hudson, G. H.	Westfield, G.
Lancaster, G. H.	Weston, G.
Leominster, G. H.	Westwood, G.
Lexington, G.	Williamstown, G.
Leyden, G.	Winchendon, G.
Manchester, G. H.	Winchester, G.
Marblehead, G.	Winthrop, G.
Marlborough, G.	Wrentham, G.
Medford, G. H.	Yarmouth, G. H.

The list marked A above includes the names of cities and towns which have more than 20,000 inhabitants, and which are, therefore, required by law to give instruction in manual training in both elementary and high schools.

All the other towns (list B) maintain some form of manual training, although they are not required by law to do so. Satisfactory as this showing is, it does not give an adequate idea of all that is done in industrial education in the State at large. It does not tell of the construction work in paper, clay, raffia, etc., which is done in the primary and the grammar schools all over the State in connection with the work in drawing. It does not tell of the excellent and widely extended work done

in gardening in many of the larger as well as smaller towns. It does not take any account of what is done in one or two schools of a town, or of plans made and carried out in the model and practice schools connected with the State normal schools.

From the mass of information sent to me by superintendents and teachers of industrial training, I will select and present some outlines of work done which may be of special interest.

*Model and Practice Schools.* — As would naturally be expected, some of the best instruction in industrial training is being done in the model and practice schools connected with the State normal schools. The work here is carefully planned for all grades of elementary schools as a means of training for students in the normal schools. The plan of instruction is worked out from somewhat different points of view, and is on this account all the more interesting. The work done in these schools is important because it serves as a kind of model for superintendents and teachers in general, and because it is the kind of work which present teachers in training will be likely to carry on in their schools. For these reasons it seems well to give a brief statement of the plan which is followed in each school.

#### 1. BRIDGEWATER.

We are experimenting in turn with various materials, to find the value and place of each in the child's life.

We believe that original thought and skilled labor are essential to industrial progress. Hence, our problems present to the child:—

1. Opportunities for the original designing and the making of objects to meet definite needs.

2. A series of progressive steps leading to technical mastery.

These methods are elastic and used with due regard for schoolroom conditions and for the age and interests of the child. These ideas, however, serve as the point of departure.

#### A. — *A Course in Art.*

[Outline showing the place of the industrial element in the complete course of art study.]

##### *Main Groups.*

1. *The fine arts*, — primarily an expression of and appeal to the spiritual nature of man.

2. *The industrial arts*, — intended to beautify useful objects.

*Forms of Art Expression.*

Pictorial: in the fine arts,—painting; in the industrial arts,—illustration.

Decorative: in the fine arts,—painting and sculpture; in the industrial arts,—decorative design.

Constructive: in the fine arts,—architecture; in the industrial arts,—*varied industries*.

*B. — Industrial Phase of the Course in Art.*

[The following includes only forms of industrial work in which: (1) Constructive and decorative design and the making of patterns and drawings are required. (2) The nature of the work is adapted to present conditions in the common elementary schools.]

*Main Groups.*

1. Phases for study and simple drawings but not offering problems suitable for execution in the schoolroom, *e.g.*, civic plans, architecture, landscape gardening, interiors.
2. Phases offering problems suitable for schoolroom construction:—
  - (a) In weaving, spinning, sewing, embroidery and the allied occupations of braiding, knotting, knitting, crocheting, tatting,—for use in the study of basketry, rug making, lace making and the textile industry.
  - (b) In measuring, cutting, pasting, gluing, nailing,—for use in constructing home and office conveniences from paper and cardboard, leather, metals, in stenciling, in box making and in bookbinding.
  - (c) In modeling, carving and woodworking processes,—for use in the study of ceramics, leather modeling, wood carving and carpentering.

*C. — Methods.*

Study of any form of art includes:—

1. Knowledge of technique.
2. Study of masterpieces.
3. Original designing.
4. Creating results.

Specific steps in industrial work:—

1. Source, variety and value of material.
2. Experiments to learn constructive and decorative possibilities of material.
3. Collections of products: for school museums; for individuals.
4. Constructive designs for an object the need of which the child feels.
5. Decorative designs for the same.
6. Selection of material and estimate of cost.
7. Construction.
8. Market value of the product.

## 2. FITCHBURG.

The underlying purpose of manual work in the training department is to give the pupil the broadest possible knowledge of tools and materials, which shall not only afford manual and mental activity, but shall also, by being closely related to the child's interests in and out of school, reveal to him typical phases of the industrial life about him, cultivate æsthetic taste and afford large opportunity for self-expression and individual growth.

The problems worked out in the class room aim to further "industrial intelligence," and involve such materials as clay, paper and cardboard, textiles, wood, leather, metal, cement. The work is closely related with that in art, mathematics, geography, nature study, etc., and constant conference is held with supervisors of these departments and others interested in industrial education, in order that the handwork shall tend toward the best development of the child in the most practical manner possible. Constructive drawing and design are carried on under the direction of the art department and objects executed in manual training classes. In connection with geography, where industries are studied, materials in raw and manufactured form are examined and pupils occasionally taken to visit typical industries in the city.

In nearly all grades objects are made to aid in nature study, geography, history and other subjects. Playtime, too, is considered in the construction of toys, games and puzzles. A suggestion of the spirit of our industrial work may be given, possibly, by citing that in some particular grade. For instance, in the fall of 1907, in grade VIII., regular periods were devoted to drawing and design each week; likewise to shop work by the boys and sewing by the girls. In this work, opportunity was afforded for individual expression and a higher standard of workmanship appreciated and aimed for by the child than in previous grades. The boys' shop work was augmented by a study of bridge construction, and various models designed and executed by the children. The history of printing having been studied in connection with English, the art and manual training departments assist in the construction of a booklet. This leads to the construction of a more pretentious book later in the year. Metal and leather are manipulated in this year's work as well as wood and textiles, and local industries involving these materials considered.

School buildings and the playground offer occasional needs which pupils are able to supply, a plant box, umbrella rack and basket-ball nets being some of the problems under consideration at the present time. Curtains and similar articles are designed and made by the girls. These and other outside work are executed by a guild of the best workers, and pupils keep records of cost of material, time of labor, etc. Although this is a recent experiment, it has proved its worth in many ways.\* Another interesting and recent experiment is that begun



with a class of children, part of whom are undeveloped, in permitting them more than the usual amount of time for manual arts. Home work is encouraged and aided in various ways.

### 3. FRAMINGHAM.

There is work in cardboard construction carried on in a systematic way from the first grade through the seventh, followed in the eighth and ninth by sloyd.

The second and third grade pupils make rugs and dolls' hammocks, and the fourth grade raffia work. The fifth and sixth grades are interested in simple basketry, and have made useful articles out of burlap and tile matting. The girls in the sixth and seventh grades have sewing, and in the eighth and ninth grades they have household arts. Among the things made of wood this year by eighth and ninth grade boys are the following: match-scraper, keyboard, inkstand and pen tray, tooth-brush holder, bulletin boards, seance, broom holder, brush holder and brush rack. In leather they have made mats and penwipers, and in brass, different kinds of trays.

### 4. HYANNIS.

Ends to be attained:—

(a) To be the means of establishing consciously or subconsciously a love and respect for honest toil for some useful end.

(b) To show the value of the three R's, and therefore serve as a means for reasonable correlation.

(c) To teach social responsibility and so increase the child's interest and share in home duties.

The manual work may be subdivided into three divisions:—

1. The garden work, which is given in the second, fourth and eighth grades. In this work much correlation is possible with the children in arithmetic, geography, nature study. In laying off the garden plots the pupils of all grades learn much in using arithmetic.

2. The basketry and woodwork given in all grades in one form or another. Cane seating and footstool making in the sixth and seventh grades have given an opportunity to show the intrinsic value of such work to the community.

3. The housekeeping activities, given in the first, third and fourth grades. Sewing in the seventh, cooking in the ninth and helping in care of rooms in all grades.

The work begins in the lower grades as play or in making articles for the playhouse, and in the upper grades the work is done, as far as possible, on real things, serving real needs apparent in the child's life. The ninth-grade boys in woodworking are banded together as a manufacturing concern, are paid for their products and are making real, usable, salable articles.

The garden work of the eighth grade is of the same kind. Vege-

tables are raised for sale, while in the lower grades the flowers and vegetables are used for home or school.

The housekeeping activities begin with playhouse conditions in the lower grades and end in real housekeeping activities, in bed making, sewing and cooking, in the upper grades.

It is readily seen that the work undertaken at Hyannis is not arranged in any systematic course. We make constant changes in the work; we hope to keep to the general principles outlined above.

#### 5. LOWELL.

The individual work is from grades III. to VI., inclusive, along the following lines:—

*Grade III.*—Work with raffia and tile matting, one half hour per week.

*Grade IV.*—Sewing for boys and girls, one hour per week.

*Grade V.*—Sewing for girls and whittling for boys, one hour per week.

*Grade VI.*—Sewing for girls and weaving for boys, one hour per week.

Cooking and bench work for the upper grades to be introduced soon.

#### 6. NORTH ADAMS.

In the Mark Hopkins training school we begin woodworking in the kindergarten, continue it by means of whittling up to bench work, which begins in the sixth grade and continues through the ninth. In the kindergarten we begin with large forms of weaving, then by successively smaller material for warp and woof we continue through the primary grades, and finally arrive at sewing in the fourth grade, which is continued through the ninth. Decoration becomes a more prominent feature during the later years. Paper and cardboard work begins with folding and cutting in the kindergarten, and continues in constructive lines until box making is reached in the middle grades. A new feature which we are introducing in the grammar grades is the production of articles by the division of labor. This will apply to box making, woodwork and sewing. We have also set up a kitchen and dining room, and are giving instruction to the girls in the eighth and ninth grades in the lines of domestic science and art. The State furnishes the accommodations, the city the teacher.

School gardening is going on apace. At present it is confined to the kindergarten, first grades and intermediate grades. If our plans for extended work are carried out all grades will practise gardening.

#### 7. SALEM.

The industrial work is based upon the theory that the construction of every object should result, if possible, from a motive that originates with the child in consequence of a recognized need of the individual,

the home or the school; that the course, therefore, should be very flexible; and that it should be progressive in its character, beginning with the kindergarten.

Inasmuch as the school must afford opportunity for observation and practice by prospective teachers, many of whom must do their own teaching under somewhat unfavorable conditions, care is taken to provide only simple equipment, and to undertake but little work that cannot be accomplished in the class room of an ordinary school.

Much attention is given to the development of the power of initiative; originality is encouraged; the products of the course are practical expressions of the instruction in drawing; and the work is closely correlated with various other subjects.

The garden has afforded the motive for much of the bench work. This includes flower, vegetable and geography gardens.

The woodworking at the bench is limited to the boys of the sixth, seventh and eighth grades of an eight-year system, and the girls in these grades receive practical instruction in sewing. The instruction is given by their respective room teachers, and it includes mending, plain sewing and the construction of simple articles of clothing. The sewing machine is used by the pupils as occasion may require.

The elementary manual work includes cardboard construction, raffia weaving, jute weaving, the making of bookcase hangings, curtains, cushions, etc., leather and metal work.

Covers have been made for the school work; such objects as arithmetic folios, history covers, language covers, etc., have been constructed and decorated.

Christmas work occupies some time each year, and includes the making of many useful objects, which necessitate the knowledge of constructive drawing, color and design.

The leather work comprises the making of scissors cases, card cases, pocketbooks, blotter covers, pen wipers, belts, etc. These also are made from structural drawings and designs made by the students. They require also a knowledge of color and design.

The weaving includes the making of fans, mats, cushions, rugs, baskets and a variety of useful objects. The looms, needles, etc., necessary for the weaving are made in the industrial laboratory; and in some cases the necessary apparatus for leather and metal work is constructed by the pupil.

The outline of the course of study in the manual arts as now presented is given in brief form below:—

*Grade I.*—Paper cutting of vegetables or fruits. Paper or cardboard model for Christmas candy box or cornucopia; decoration for same. Paper cutting of stories, toys and objects; aim, a negative and positive result from each cutting. Wool weaving of doll's cap, hammock or rug.

*Grade II.*—Freehand paper cutting of fruits or vegetables for the

construction of a Thanksgiving souvenir. Paper or cardboard model for a Christmas box; decoration for same. Wool weaving of rug on small loom. Geometric forms: square, rectangle, circle. Geometric terms: vertical, horizontal, diameter, diagonal. Cutting of radial designs, using these terms. Basket weaving from paper and splints.

*Grade III.* — Paper cutting for action and expression. Some gift for Christmas (list of options too long to give in full). Macramé knotting and jute weaving. Cardboard and raffia problems.

*Grade IV.* — Practice in use of compass. Loom of cardboard for first-grade weaving. Christmas box or gift based on the circle. Covering of a book. Raffia weaving. Some cardboard and paper models requiring planning, measuring and pasting. Application of decoration to this model.

*Grade V.* — Covering a book with paper. Raffia weaving. Paper and cardboard work requiring planning, measuring, folding and pasting, such as: blotter pad, magazine cover, portfolio, notebook covers; decoration for these models if needed. Simple problems in leather and reed.

*Grade VI.* — Elements of working drawing and many geometric terms. Woodworking: clappers, calendar back, decorated, short dibber for school garden, long dibber for school garden, whistle, bean-bag board for primary grades, simple articles of apparatus needed by other departments of the school.

*Grade VII.* — Practice in use of Springfield drawing kit. Simple working drawing. Whittling problem. Small loom for use in primary and grammar grades. Simple articles needed by other departments of the school or the home. Articles for school playground and garden. Study of woods used and analysis of objects, to determine kinds of lumber used in their construction.

*Grade VIII.* — Loom for model school. Large and small needles, shuttles and heddles for same. Folding screens for school building. Playground fixtures. Study of woods used, practice in selecting woods, and analysis of objects, furnishings and finishes.

#### S. WESTFIELD.

The work has been outlined with the definite purpose of meeting the demand of child nature for activity, of providing material suitable to his age and experience, by means of which he may give expression to his ideas, and of bringing into closer relation the school and the home.

The various phases of the work may be summed up as clay work, paper folding, free-hand paper cutting, weaving, woodwork and metal work.

The clay work in the lowest grades is modeling objects familiar to the child, training hand and eye in expressing ideas of form. In grade II. we have the beginnings of pottery, — primitive method of coiled

bowls. In grade IV. we go a step further and use clay as a definite means of design,—the paper-weights, tiles, bowls and vase forms being glazed and fired, thus giving permanency to the child's best effort.

In free-hand cutting we aim to take advantage of the child's instinctive activity, and to so direct it that it may do away with aimless cutting and may become a means of frank, direct expression of ideas gained through interest in stories, games and rhymes. It is absolutely free hand, and each cutting shows but two parts—the object cut and the place from which it came. By mounting the cuttings on a sheet we show that there has been no clipping, to make more perfect. It is free story telling with paper and scissors.

Weaving begins in the lowest grade, with paper mat weaving of over and under weaves; with simple variations, double strip weaving, simple loom, in grade II.; with larger loom, more intricate weaving, in grade III.; with the use of continuous looms and heddle in grade IV.; terminating under the name of basketry in grade V.

In grades VI. and VII. the girls take up sewing, and the boys bench work, learning the use of common tools.

In grade VIII. the girls have cooking, and the boys advanced wood-work and metal work, consisting of simple trays and bowls of copper. In all our work the element of design is an important factor; the problems are given and the limitations set in the manual training department, designed in the class room, under art instructors, and executed in the manual training department.

We strive for good proportion, pleasing contour, simple decoration, without sacrificing construction, believing there need be no separation between utility and beauty.

*Boston's Experiment.* — In all grades of the grammar schools of Boston there is given at present, for two hours a week, instruction in cooking, sewing, woodworking, cardboard construction and clay modeling. Not content with this generous provision for industrial training in the lower schools, and with the excellent vocational training offered in the Mechanic Arts High School, High School for Commerce, Girls' High School of Practical Arts, free evening drawing schools and vacation schools, Boston has during the past year begun an experiment which may prove to be of the greatest importance.

In September of the present year a work shop was opened in the Agassiz School district for the accommodation of those members of the sixth grade who desired to give one hour a day to some form of industrial training, with the provision that they would keep up with their regular studies.

At the same time the school committee accepted the offer of the North Bennet Street Industrial School to take 50 girls from the Hancock School and give them industrial training two hours of every afternoon throughout the week. Here, too, the girls were expected to keep up with their regular studies, having some extra individual assistance in some study in the afternoon.

Of the first of these experiments, Mr. Frank M. Leavitt, assistant director of drawing and manual training, writes:—

Manual training as given in the Boston public schools aims to give the pupils a practical knowledge of those fundamental, geometric and constructive principles which form the basis of nearly all constructive industries. It should be remembered that a large proportion of the industrial workers in a State like Massachusetts are engaged in a diversity of occupations, many of which will probably never be taught in the industrial schools now advocated. These schools will be equipped, more or less completely, for giving instruction to machinists, workers employed in the building trades, textile workers and shoemakers. It is improbable that the trades employing less skilled and a smaller number of workers will have the benefit of special trade schools. It therefore follows that the major part of the industrial training will have to be given in connection with, or as a part of, the regular manual training, and it is believed that the work now being done in cardboard, weaving, modeling, woodworking will give the pupils manual power and industrial intelligence, which will make them far more efficient than pupils who fail to receive such instruction.

It is felt, however, that too little time is given to this work, and especially that it fails to reach, in the right amount, those pupils who leave school at the age of fourteen. To meet this condition an experiment is now being made in the Agassiz School, at Jamaica Plain. About one third of the boys in grade VI. have elected to join the industrial class, so called. This class spends one hour a day in manual training. The product of the work which this class is to do is to be not only useful, but is to be something which is needed, and is to be put to actual use. The product must be something which may be produced in large quantities. The methods must be practical, and both product and method must be subjected to the same commercial tests, as far as possible, as apply in actual industries.

The attention of the boys will be called to common industrial methods which are used in real life. For example, the first model selected was a paste-board box, several hundred of which are used by the supply department; each boy made a single box, after which the class was divided into groups and an explanation was given of the greater economy of employing industrial methods. Jigs were made for facili-

tating some of the operations and for securing greater uniformity in the product. Each group performed one of the several operations involved in the making of the box or cover; there were the box cutters, cover cutters, stayers, pasters, fitters and gluers; there were those who assembled, inspected, packed and counted the boxes, and there were those who acted as assistant teachers. By the employment of such methods, and especially by continuing at one line of work for a longer period than is commonly done in the regular manual training work, the efficiency of the boys is increased greatly. The boys were required to keep careful record of time, material and output, and to make computations based thereon.

The experiment briefly outlined above is very new and it is early to predict results. It is hoped that the training received will itself add something to the efficiency of the boys, and it is also hoped that it will so attract them to industrial pursuits that they will seek admission to more complete industrial courses, which now exist or may be established later.

It is hoped that this experiment may contribute something of a practical nature to the discussion as to the place of industrial training in public instruction.

In observing the working of this experiment, I endeavored to answer, to my own satisfaction, certain questions which would naturally arise in a change of school program so radical as this.

While I am not certain but that the program suggested in another part of this report would be better than this one, I feel confident (1) that the pupils are intensely interested in the work, (2) that they are becoming skilled in remunerative service, (3) that their other studies are not seriously neglected, and (4) that the training in industrial work does not create in them an undue desire to leave their studies and go to work at too early an age.

The last conclusion was the most difficult one to reach, and would perhaps need the testimony of parents and teachers to be final. But judging from the answers to questions put to the pupils individually, I could but think that the individual work taken did not divert their interest from other school studies, and would not, therefore, tend to take them from the school.

Concerning the industrial experiment with the girls of the Hancock School, referred to above, Miss Florence M. Marshall writes: —

We are taking from that school 50 girls, who are either advised by Miss Sawtelle, or themselves elect, to spend the afternoon session each day at industrial work in place of the regular public school. These girls must be thirteen years old or over, and must come from the last three grades,—the sixth, seventh and eighth. They come to North Bennet Street from two to four each day, and Miss Sawtelle has tried to arrange their programs so that they still go on with the most essential subjects in the morning, that they may pass from grade to grade and graduate with their class. Where this has not been possible, we are trying to introduce the kind of work which the girl misses in the morning, in connection with her industrial work in the afternoon.

We are giving the girls sewing, by hand and machine, applied in the making of simple garments, house furnishings, etc.; domestic science, which includes cooking, buying, serving, the care of rooms, dishes, laundry, etc.; design, particularly in its application to the industrial work which the girls are doing; textile study, especially emphasizing weave, quality, kinds of fabrics, dyes, width, cost, wearing quality, etc. Personal hygiene and gymnastics are also a part of the afternoon's work.

The plan for co-operation with the public school work is as follows: each teacher who sends girls to the industrial school—eight teachers in all—is sending me her girls' programs, that I may see just what is omitted by the transfer. She is also sending me reports of the weaknesses or difficulties in any study, that I may help to strengthen the girl's work at that point. As you will see, it is quite possible to put life into the arithmetic when it is applied to purchasing, measuring and estimating cost in the making of garments, or to the preparation of a meal. In connection with any of our subjects, it is possible to introduce some writing and composition, and there is ample opportunity, if we are in close touch with the work of the grade, to apply the geography and history.

Instead of breaking up each day into small classes, the groups are so arranged that almost the entire period of two hours is given to one subject. For instance, the group of girls who take domestic science any day spends the entire time in that class, as it is felt that not only is the interest greater, but that the lesson on close application to one thing until it is finished is of importance.

This gives in a general way the plan for the year's work, and we are hoping, by taking the girl at just this period, the year before the law allows her to leave school, to interest her to stay in school longer, or, when that is not possible, to stimulate her ambition and desire to enter a better occupation than would otherwise be possible.

The problems involved in this second experiment are in some respects more difficult to solve than the first, inasmuch as the time taken from the regular school exercises is two hours daily



instead of one. But considering the character and age of the children, and the fact that they have extra individual help in one of their studies, I can but think that the experiment so far as it has been tried is a success. Certainly all forms of the industrial work are enjoyed fully by the girls and the results in many cases are surprisingly good. So great was their interest in the work at the time of my visit that they appeared willing to spend extra time upon their studies so as to retain the privileges of the class. I observed also that in several instances extra garments were made by the girls at home, for themselves and other members of the family.

Upon the whole, these experiments in Boston, together with the work which has been done in Hyannis and elsewhere, ought to strengthen us in the conviction that industrial training should have a larger place in the elementary school curriculum than it has had in the past. To insure success, however, it will be necessary to have (1) an abundance of time for all the exercises of the school, (2) work carefully selected and properly adjusted to the needs of the pupils, and (3) the cordial co-operation of the teachers and parents. With these conditions assured there is reason to believe that the training offered will be for the cultural as well as the vocational well-being of those who take it.

*Home Industries.* — Among the reports of work accomplished in industrial training few show more signs of promise than those which refer to home industries, which are promoted by the efforts of superintendents, teachers and associations of various kinds. The most common form of such industries is gardening, although considerable work is done in garment making and the making of things used in the home.

The most effective means of arousing an interest in home industries is the efficient work done in good industrial courses. With successful achievements in school as a spur, many pupils plant gardens of their own, cut and make garments for members of their families, do the necessary repairing in the home and make such things as are needed there. Sometimes this home work is encouraged by calls for reports, or by an inspection of the work accomplished; and sometimes it is promoted by public exhibitions, in which the best work is taken note of.

Several instances of the promotion of home industries by school authorities have come to my notice, two of which I will refer to. The first instance is that of a supervisory union of three towns, in which the children were urged to carry on the home work by the superintendent. Of this effort, Superintendent Frost of the Georgetown district says:—

Some six weeks before parents' day I sent mimeograph letters to each of the homes, naming the day of exhibition and suggesting lists of things to make at home. First, different things to be cooked; second, needlework, embracing crocheting, knitting and embroidery; third, useful things, embracing a large selection. Many of the children took part and produced things of considerable merit.

In the fall after this appeal was made there was an exhibition of industrial and garden products, which was quite fully reported in the local newspaper. The extent of the exhibit may be inferred from the fact that more than one hundred articles were sent by the pupils of one school alone.

The second of the examples of home industrial work referred to above is that of a small city — Marlborough. This plan was started and promoted by the Marlborough School and Home Industrial Association, consisting of the members of the school committee, members of the Teachers' Association and the superintendent of schools. The aims of the association are "to furnish the children something interesting, practical, profitable and instructive to do during vacation; to bring them into touch with nature and her laws in a sensible way; to develop the child's sense of ownership through natural avenues; to emphasize the dignity of labor; to develop the desire and ability to make the home attractive, pleasant and inspiring; and to bring the home and school into more co-operative relations, that the child may be benefited by their combined efforts."

Early in the present year the following lines of work were suggested, with the promise of an exhibition in the fall:—

*Group 1.*—Flowers: aster, bachelor's button, petunia, candytuft, four-o'clock, marigold, scabiosa, morning glory, nasturtium, phlox, China pinks, verbena, zinnia, portulaca. Children may select from this list.

*Group 2.*—Vegetables: beets, beans, carrots, lettuce, squash, radishes, turnips and sweet corn.

*Group 3.*—Cooking: white bread, brown bread, common cake, light or dark (not more than two eggs to a cake), cookies, pies, preserves and jellies.

*Group 4.*—Sewing: any article selected from the manual training course in sewing, napkins, tray cloths, dish towels, doilies, handkerchiefs, sofa pillows and dressed dolls.

*Group 5.*—Woodwork: any article listed in the manual training course, models of bird houses, single or double sleds, carts, wheelbarrows, tables, chairs, and any other model of wood that shows ingenuity and good workmanship.

*Group 6.*—Miscellaneous: any article of any material that shows thought, originality and good workmanship. This group allows the child to work up any article in which he is particularly interested.

Rules and limitations for carrying on the work and for the inspection of results were made and sent out early in the year, the privilege being offered to pupils of grades IV. to VIII., inclusive.

Of the results, Superintendent Morton writes as follows:—

Of 1,300 children in the grades mentioned in the pamphlet, about 1,000 were anxious to participate. Each selected the particular lines along which he wished to work. The boys were encouraged to make working drawings or to cut patterns of the articles to be made; the girls drew designs for much of the needlework.

Seven thousand eighty-three penny packets of seeds were sold to those who wished to plant gardens. The children selected the plots, measured them and drew plans to a scale. These gardens were planted and cared for by the children, under the supervision of teachers and parents. These visits to the homes brought the teachers, parents and children together on a common plane of usefulness, which has been of great value to both school and home.

An exhibition was held in September. Although the hall is quite large, the articles had to be crowded in order to get all into the space assigned. With this compact arrangement there were 75 feet of 3-foot tables covered with flowers, 85 feet of similar tables covered with vegetables, 35 feet covered with woodwork, 55 feet devoted to cooking, 20 feet devoted to miscellaneous articles and 675 square feet of wall space covered with needlework.

Much interest was manifested in the work and the exhibition. I think fully 2,000 people visited the hall during the afternoon and evening. We intend to continue these lines of work during the present year. I shall hold meetings of parents during the coming months, to discuss the work, and hope to have the association include the school committee, all of the teachers and a large number of the parents.

*School Furnishings and Repairs.* — Not the least valuable part of industrial training in the schools is the work which grows out of the direct needs of the school, such as are included in the ordinary furnishings of the schoolroom and in the apparatus for teaching arithmetic and elementary science. The making of needed repairs of the school buildings also serves as a means of applying to good advantage the industrial skill of the pupils. I have observed the results of this work as well as the work itself. I have realized the great use of this form of training as a means both of instilling in the children a true spirit of service and of leading them to acquire skill.

Among the school furnishings which I have seen the children at work upon are looms, boxes, pen trays, book racks, sand tables, screens, shelves, card racks, and the various means of teaching the ordinary branches, including wigwams, houses and apparatus for teaching physics.

Several schools have made a complete doll's house of large size, the furnishings of which were contributed by the various classes.

In one exhibit of pupil's work in a country school was a model house, the construction of which had involved problems in carpentering, plastering and papering.

Referring to this kind of work, Superintendent Chace of the Tewksbury district writes: —

The boys of one school have constructed some rude furniture for the use of children who ate their dinners at the school building. Another school cleaned its yard of hundreds if not thousands of stones, and the work thus begun resulted in the blasting of rocks, grading of the lawn, planting of shrubbery, etc., by the town, and some splendid examples of good citizenship on the part of a few individuals in the community. Another school planted some wild shrubs obtained from the woods. It may be best to state that nearly all of these shrubs lived. Several schools planted flowers about the school grounds. One of our schools is hemming towels for the use of the children in the building, and another is making some for the use of a primary school whose pupils are too young to do the work.

Superintendent Chace closes his report with this significant statement: —

We are not doing much — not nearly so much as I believe we ought — but I hope we shall continue to make a slow, healthy growth that

shall retain the right spirit of industrial work, so far as we are able to understand what the true spirit is.

This word of caution relating to the industrial training of a few schools is most timely and important for all, especially at a time when people and schools are so eager to make work with the hands a part of general education. The great danger at present lies in aimlessness and superficialness of effort, both in the projection and in the carrying out of the work. Above every other consideration there should be inculcated in this early training a true spirit of service. To this should be added an insistence upon the greatest skill and efficiency of which the children are capable. Thus will be furnished a good preparation for life in general, and a good foundation for the vocational training which may be taken later.

#### SPECIAL CLASSES.

In many of the cities and larger towns special classes are formed for the instruction of those pupils who are unable to do the work required in any of the regular classes. These pupils need for the most part individual help, and, therefore, the classes are limited in number, — generally to 20 or 25 pupils. Of the advisability of forming such classes in the larger grammar schools there can be no question.

There is another class of children — the retarded or mentally defective children — for whom special provision should be made wherever the numbers will warrant it. The putting of these children with normal-minded children is an injustice to both classes, — to the former because they cannot get the individual attention which they need and to the latter because their progress is necessarily retarded.

To secure the best results it is necessary (1) to provide teachers especially qualified to teach this class of children, (2) to furnish means for the right kind of physical and manual exercises and (3) to limit the number of pupils for each teacher to 10 or 15. These conditions, so far as I have observed, have been quite fully met wherever the plan of local schools has been tried here in Massachusetts. In Boston seven special classes have been formed; in Worcester, three; in Newton, two; and in

Springfield, one. So beneficial have these special classes proved that they should be considerably extended in all the larger places.

Specialists differ materially in their estimate of the number of mental defectives who need separate and special treatment; but it is safe to say that every city or town having 2,000 children is likely to have exceptional children enough for the formation of a special class. There may be some of the mentally defective children who cannot be cared for properly in the local school. These children should be placed in a separate institution for the feeble-minded. There are also likely to be some parents of mentally defective children who, for one reason or another, refuse to allow their children either to go into an institution or to attend a special local school. It is a question whether the education of all mental defectives, including physical as well as mental defectives, should not be obligatory, and whether the State should not take charge of them, with or without the parents' consent.

#### SCHOOLS FOR TRUANTS.

*Name and Location of Schools.*—Some of the counties of the Commonwealth are obliged by law to support a school for habitual truants, habitual absentees and habitual school offenders. The names and locations of these schools and the names of the superintendents are as follows:—

SCHOOL.	Location.	Superintendent.
Essex County Training School, .	Lawrence, . .	W. Grant Fancher.
Hampden County Truant School, .	Springfield, . .	Erwin G. Ward.
Middlesex County Truant School,	North Chelmsford,	M. A. Warren.
Norfolk, Bristol and Plymouth Union Truant School.	Walpole, . .	James H. Craig.
Boston Parental School <sup>1</sup> (Suffolk County).	West Roxbury, .	D. P. Dame.
Worcester County Training School,	Oakdale, . .	S. P. Streeter.

<sup>1</sup> Under the law, commitments from Chelsea, Revere and Winthrop, in Suffolk County, must be to the truant school for the county of Middlesex.

The counties not named above are exempted by law from maintaining truant schools of their own, but the county commissioners of each of the exempted counties are required to assign an established truant school as a place of commitment. The places designated by the several county commissioners are as follows:—

COUNTY.	Location of assigned truant school.	COUNTY.	Location of assigned truant school.
Barnstable, . . .	Monson.	Franklin, . . .	North Chelmsford.
Berkshire, . . .	Springfield.	Hampshire, . . .	North Chelmsford.
Dukes, . . . .	Walpole.	Nantucket, . . .	—

The different ways of meeting the requirements of a law with no penalty attached are shown by these counties, two of which have designated a school but have sent no children to it, one persists each year in designating a school abolished twelve years ago, and one has not gone to the trouble of even naming a school.

*Cities and Towns represented.* — The cities and towns from which present members of each school were committed are as follows:—

*Essex County School.*

Beverly, . . . . . 9	Manchester, . . . . . 1
Georgetown, . . . . . 1	Marblehead, . . . . . 2
Gloucester, . . . . . 4	Peabody, . . . . . 4
Haverhill, . . . . . 7	Salem, . . . . . 1
Lawrence, . . . . . 40	Saugus, . . . . . 2
Lynn, . . . . . 50	

Number of towns unrepresented in the school at the present time, . . . 23

*Hampden County School. (Assigned school for Berkshire County.)*

Chicopee, . . . . . 3	Pittsfield, . . . . . 9
Holyoke, . . . . . 6	Springfield, . . . . . 12
North Adams, . . . . . 7	West Springfield, . . . . . 2

Number of towns in Hampden County unrepresented, . . . . . 19

Number of towns in Berkshire County unrepresented, . . . . . 30

*Middlesex County School. (Assigned school for Franklin and Hampshire counties and for Chelsea, Revere and Winthrop, in Suffolk County.)*

Ashland, . . . . .	1	Newton, . . . . .	4
Cambridge, . . . . .	59	North Reading, . . . . .	1
Chelsea, . . . . .	—	Reading, . . . . .	1
Everett, . . . . .	1	Revere, . . . . .	—
Groton, . . . . .	1	Somerville, . . . . .	14
Hudson, . . . . .	1	Wakefield, . . . . .	1
Holliston, . . . . .	1	Waltham, . . . . .	5
Lowell, . . . . .	66	Ware, . . . . .	3
Marlborough, . . . . .	3	Watertown, . . . . .	2
Medford, . . . . .	1	Wilmington, . . . . .	1
Natick, . . . . .	1	Winchester, . . . . .	1

Number of towns in Middlesex County unrepresented, . . . . .	34
Number of towns in Franklin County unrepresented, . . . . .	26
Number of towns in Hampshire County unrepresented, . . . . .	22
Number of towns in Suffolk County unrepresented, . . . . .	1

*Norfolk, Bristol and Plymouth Union School. (Assigned school for Dukes County.)*

Brookline, . . . . .	3	New Bedford, . . . . .	25
Norwood, . . . . .	2	North Attleborough, . . . . .	2
Weymouth, . . . . .	2	Rehoboth, . . . . .	1
		Taunton, . . . . .	5
Attleborough, . . . . .	1		
Fall River, . . . . .	7	Brockton, . . . . .	8
Mansfield, . . . . .	1		

Number of towns in Norfolk County unrepresented, . . . . .	26
Number of towns in Bristol County unrepresented, . . . . .	13
Number of towns in Plymouth County unrepresented, . . . . .	26
Number of towns in Dukes County unrepresented, . . . . .	7

*Boston Parental School. (Suffolk County.)*

Boston, . . . . .	243
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*Worcester County School.*

Fitchburg, . . . . .	2	Sterling, . . . . .	1
Lancaster, . . . . .	1	Worcester, . . . . .	46
Lunenburg, . . . . .	1		

Number of towns in the county unrepresented, . . . . .	54
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Bringing these numbers together, we find that there are 57 towns which are at present represented in the truant schools and 297 which are not. In trying to account for this great disparity of numbers here, we might naturally infer that the towns sending pupils to these schools are constantly changing; but reports show that they are nearly the same from year to year, and that there are many towns which rarely or never use this means of checking truancy. A recent inquiry reveals the fact that 269 cities and towns of the Commonwealth have had no pupils in the truant schools during the past five years, and presumably most of these never were represented there.

These facts alone may be somewhat misleading. While it is true that temptations to truancy and other forms of juvenile delinquency are not so great in small country towns as in cities and large towns, there are some cities and many large towns which never send children to a truant school. It might be inferred that in these towns the home and school conditions are so good that there is no truancy, or none that needs a resort to law; but when we examine the conditions there, we find them no better than the conditions of other towns. Again, the inference might be made that towns which send no pupils to the truant schools use other means allowed by law to correct truancy, — the prosecution of parents and guardians; but there were only five of such prosecutions last year, and three of these were towns which committed children to truant schools. Finally, we are forced to the conclusion that in some towns there is lack of interest and effort in the enforcement of school attendance laws and an unwillingness to send boys to the truant school, partly, perhaps, on account of expense and partly from fear of contamination or disgrace.

Doubtless many present faults and differences in matters relating to school attendance will disappear when the common schools everywhere offer a proper amount of attractive industrial training, when parents are held responsible for the constant and regular attendance of children in school, when local officials are aided by State attendance officers, when all young delinquents are taken in charge by the State and placed in good homes, and when the expense attending the care of all delinquent children devolves upon the State.

*Buildings.* — To meet the purposes for which these schools are established, the Middlesex County School has by far the best buildings and equipment. There are here six buildings in all. Three of these buildings are used for home and school purposes, and one for industrial classes and schoolrooms.

The new brick building for the Essex County School, referred to in my last report, is now completed and occupied. The increased number of pupils makes it necessary for the old building to be used for dormitory purposes.

The promised building for girls in the Boston Parental School is now ready for occupancy. It has accommodations for 15 or 20 pupils, but only 6 are there at present. The so-called "temporary" buildings, which have for several years been used by this institution for school purposes, are still in existence. That they should be replaced by one or more buildings having suitable schoolrooms is beyond question. The present rooms are inconvenient, unsightly and unsanitary.

*Number of Pupils and their Offences.* — The following tables show the number of boys in attendance upon the various schools and the offences for which they were committed: —

*Table showing the number of pupils attending, and number of pupils admitted and discharged during the year.*

LOCATION OF COUNTY SCHOOLS.	Number at beginning of year.	Number admitted during the year.	Number discharged during the year.	Number at close of the year.
Lawrence, . . . . .	93	45	23	115
Springfield, . . . . .	21	37	19	39
North Chelmsford, . . . . .	157	101	78	180
Walpole, . . . . .	62	46	50	58
West Roxbury, . . . . .	243	239	239	243
Oakdale, . . . . .	54	30	33	51
Totals, . . . . .	630	498	442	686

*Table showing the number of children committed to truant schools as habitual truants, absentees and school offenders, and the number released for various reasons, during the year.*

LOCATION OF COUNTY SCHOOLS.	NUMBER COMMITTED DURING THE YEAR.			NUMBER RELEASED DURING THE YEAR.		
	As habitual truants.	As habitual absentees.	As school offenders or delinquents.	At expi- ration of term.	On proba- tion and pardoned.	Sent to Lyman school.
Lawrence, . . .	38	5	2	3	17	3
Springfield, . . .	33	4	—	3	18	—
North Chelmsford,	78	6	6	1	76	1
Walpole, . . .	27	13	6	23	27	—
West Roxbury, . .	219	5	15	15	223	1 <sup>1</sup>
Oakdale, . . .	30	—	—	3	30	—
Totals, . . .	425	33	29	48	391	5

<sup>1</sup> Sent to Suffolk School for Boys.

It will be seen from the above figures that three of the schools — the Lawrence, Springfield and North Chelmsford schools — have increased their membership considerably during the past year, while the membership of the other three schools has remained about the same. The increase of commitments in almost every case is from cities, due perhaps to increased efficiency in the prosecution of offenders.

*Releases.* — The number of releases on probation is much greater in most of the schools than last year, while there has been in the same time a marked decrease in the number of boys kept in school to the expiration of the term for which they were sentenced. This is due, no doubt, to the fact that most of the recent sentences have been for an indefinite period.

The plan of indefinite sentence and release upon probation appears to be working well. The superintendents of the schools are a unit in their approval of the plan. In all the schools the boys are released on the basis of conduct, determined in most cases by a kind of “merit system.” Thus in the Hampden County School the following method is pursued: —

1. Each boy shall be given 4,000 merits to earn on entering the school. Each week a boy shall be entitled to 100 merits, or such part thereof as, in the judgment of the superintendent, the boy's conduct, effort and industry shall entitle him.

2. In estimating the number of merits to which the boy shall be entitled his conduct, effort and industry, both in school and outside of school, shall be considered.

3. A boy returned from probation shall be given 5,000 merits to earn, in place of 4,000.

4. Any boy running away, or attempting to do so, shall forfeit all the merits he shall then have earned, and the superintendent may impose upon such boy additional merits to be earned, not exceeding 2,000, together with such other punishment as in his judgment shall seem necessary.

The Boston Parental School has a plan by which pupils are expected to get 2,500 merits before a release is recommended by the superintendent. Under this plan it is possible for a boy to secure release in six months.

In the Essex County School the plan as reported is "that the boys must attain a certain standard in deportment and make good progress in their school work. Then the matter of parole is considered by the commissioners, superintendent and matron, and, if approved, we then ask for the approval of the judge and the superintendent of schools from the city or town sending the boy. With their consent he is released upon parole."

There is no doubt that releases on probation should be permitted only on merit, but whether that is best determined by the plan of marking most generally followed in these schools is a question. In several instances during the past year I noted what appeared to me to be arbitrary and unjust methods of marking, as, for example, when a slight infraction of a rule caused a boy to lose all the credits he had obtained by two days' perfect conduct. It is, I believe, folly to advise or allow officers and teachers to follow a fixed schedule of marking offences, each offence to have a certain mark. Officials poor in sympathy and weak in control will be sure to abuse their privilege to the point of actual tyranny. Under such circumstances boys lose all respect for authority, or even for justice itself, and so become less rather than more ready for citizenship when they go out into the world.

*Period of Membership.* — The length of time during which boys remained in the various schools is shown by the following table: —

*Table showing the time of service of boys in the various schools.*

SCHOOLS.	Longest time served by any pupil (months).	Shortest time served by any pupil (months).	Average time of service (months).
Lawrence, . . . . .	27.5	18	23.5
Springfield, . . . . .	22.8	.7	15
North Chelmsford, . . . . .	39	7	—
Walpole, . . . . .	29	3	14.9
West Roxbury, . . . . .	43.6	.2	12.9
Worcester, . . . . .	26	4	9.1

*Occupations.* — The time spent in work and recreation in the various schools is shown in the following table. It should be said that the times given are approximate only, there being a difference of time between the occupations of the younger and those of the older children, also in the occupations of different seasons of the year.

*Table showing the average number of hours spent daily in various occupations.*

COUNTY SCHOOLS.	Household and outdoor duties.	School duties except manual training.	Manual training (average).	Meals and recreation.
Lawrence, . . . . .	5½	3	—	6
Springfield, . . . . .	3½	4 $\frac{7}{20}$	½	5 $\frac{13}{20}$
North Chelmsford, . . . . .	1½-5	3-5½ <sup>1</sup>	$\frac{9}{10}$	3½-5½
Walpole, . . . . .	5 <sup>2</sup>	4 $\frac{3}{4}$	—	4
West Roxbury, . . . . .	1-5 <sup>2</sup>	4½	½	2½-4
Oakdale, . . . . .	3-4	5	—	4½-7½

<sup>1</sup> The youngest boys have two sessions.

<sup>2</sup> Younger boys have no household duties.

Regular school sessions are held in all the schools, there being one session of three hours in one school and two sessions in all the others. In one school, North Chelmsford, the older pupils alone have one session.

The course of studies pursued is in general the same as the course ordinarily pursued in grammar and primary schools, the purpose being to have the boys keep along with the regular studies so that they may rejoin their classes upon their return home.

The table shows a great difference of time given to manual training in the various schools. The difference in kind is quite as great. In two of the schools only is the work in this department at all adequate to the needs of this class of boys. Even in these schools the industrial feature of the course is not emphasized as much as many persons advise, especially that which is provided for the older boys. But in the other four schools — two of which have absolutely no manual training — the boys have no training which will be of any assistance to them either in learning a trade or in creating a desire to learn one.

Some of the replies to my question put to the older boys, as to what they expected to do when they left the truant school, were most pathetic. One boy, who was to leave when sixteen, said he did not know what he should or could do. He had learned nothing, he said, but some housework and farm work, but he was not sure that any one would want to hire a boy for either. Further inquiry brought out the fact that even in these occupations his range of work had been too narrow to be of special service to him as a workman. It is a crying shame that such a boy — and he is a type of many — could be held in an institution for three or four years and then be set adrift in the world, with no more means of helping himself than he had when he entered the institution.

In this criticism of neglect I am only repeating what has been said by one agent or another of the Board in nearly every report upon these schools during the past eight years. It may be held by those who are responsible for this condition of affairs that all these adverse criticisms happen to come from those who hold the same extreme notions concerning industrial train-

ing. But I venture the opinion that there is not one person in the country at all prominent in educational or charitable work who does not say that the most important part of the education of this class of children is instruction and training on industrial lines in the direction of learning a trade, and who is not surprised that there are schools for truants here in Massachusetts which offer no help in this direction.

*The Probation System.* — The returns show that 378 boys in all were released on probation from the schools during the past year, and that of this number 112 were returned to the schools. Of the number returned, 90 belonged to the Boston Parental School, 11 to North Chelmsford, 4 to Lawrence, 3 to Springfield, 1 to Walpole and 3 to Oakdale.

The fact that so many children were returned to the schools, presumably because they had broken their parole, might be regarded as an argument against the probation system if all the circumstances were not considered. I have not been able to ascertain the cause of the return of all the children, but from the investigations I have made I judge that in a large proportion of cases failure to keep the terms of parole was due to poor home influences. When there is no mother or no father in the home, or when the influence of either mother or father is distinctly bad, it cannot be expected that the child can in one or even in two trials correct fully the bad habits which he has been permitted to acquire.

This is the cause of the forced retention in the schools of many children who have by the merit system gained credits enough to warrant their release, but who have no good homes to which they can go. This difficulty is voiced by Superintendent Warren, of the Middlesex School, in his report of this year to the commissioners. He says: —

There is danger of a home school of this kind becoming an asylum for homeless children. It is my opinion that a boy should not be kept here because he is homeless, or because he may become a subject of charity. I would recommend that your Board seek such legislation as will permit you to place these children at board in private families until sixteen years of age, when in your judgment it would be better for the child, the expenses to be paid by the city or town from which the child is committed. Either this, or allow us to transfer to the care

of the State Board of Charity these homeless boys, some of them mentally weak by inheritance.

All this suggests the plans recommended in my last report, two features of which were (1) the early apprehension of school delinquents who have no proper care, and the placing of them in good homes, and (2) the plan of rigidly holding the parent accountable for the delinquency of his child by a reasonable system of fining.

That the proposed plan of fining has not yet been fairly tried is shown by the fact that only five prosecutions of parents were reported in the returns from superintendents of schools recently called for. So far as these prosecutions of parents prove anything, they prove that the holding of the parent accountable for his child's presence in school is both feasible and wise. In three of the five cases of prosecution referred to the parents were placed upon probation by the judge, and in every case satisfactory improvement was brought about without the imposition of a fine.

*Recommendations.* — In my last report I made detailed recommendations in the direction of a complete reorganization of plans for the treatment of juvenile delinquents and offenders. Knowing how difficult it is to make radical changes of organization, I will content myself with offering a few suggestions for improving these schools as they are at present organized.

In making these recommendations I am not unmindful of the fact that nearly every one of them involves increased cost of maintenance. Very likely the cost of maintenance would be doubled by the adoption of all the suggestions proposed. But so far as the suggestions are wise, the extra expense is in the interests of future citizenship, and, therefore, should not be considered. At present the expense per capita is so small — in some instances but a little more than two dollars a week — that there may well be a suspicion in some minds that the schools are managed more in the interests of economy than for the educational or moral welfare of the children. The recommendations, some of which I have already referred to, are: —

1. That the buildings be inspected by the State Board of



Health, with the view of ascertaining whether the schoolrooms and dormitories are properly ventilated.

2. That the school day be lengthened to six hours for all the pupils, one hour and a half or two hours of which to be devoted to physical and industrial training.

3. That during the time that the school is in session the time for household and farm work be limited to two or three hours a day, and that there be such a rotation of duties in that work as to make it useful as a means of training.

4. That there be a skilled supervisor over all the schools, to advise in the selection of teachers, to lay out the work of the schools and to advise and direct as to methods of teaching.

5. That those persons only be appointed as teachers who are by personal sympathy, patience and professional ability especially fitted to teach this class of children.

6. That the greatest care be taken in the selection of the pupils' books, particularly in the selection of books for reading out of school hours.

#### SPECIAL SCHOOLS FOR DEFECTIVES AND DELINQUENTS.

I have had the privilege of continuing my visits of inspection upon those institutions which include schools for the deaf, blind and feeble-minded and reformatories for boys and girls. I regard such service as a privilege, because it affords an opportunity to observe some interesting educational processes and of bringing me in contact with men and women whose lives are devoted to the great work of helping the weak and unfortunate to help themselves.

While the ideals and methods of these people are probably as varied as are those of other educational workers, it is but just to say that the work done by them is, on the whole, well done, and that the interests of the State as well as those of the pupils themselves appear to be amply protected.

The reports of all these institutions will be found in Appendix F.

Respectfully submitted,

JOHN T. PRINCE.



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APPENDIX B.

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REPORT OF J. W. MACDONALD,  
AGENT OF THE BOARD.

- I. STATE INSPECTION OF HIGH SCHOOLS.
  - II. CAN HIGH SCHOOL INSTRUCTION BE MADE MORE PRACTICAL?
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# REPORT.

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*To the State Board of Education.*

## I. STATE INSPECTION OF HIGH SCHOOLS.

During the year just ended the inspection of high schools has called for a greater amount of time than I have been able to give to it, after doing other general work that has devolved upon me. Moreover, this work is increasing year by year, and requires in most cases much more than merely visiting the schools.

There are now three different purposes for which the Board requires high schools to be inspected.

First, there are at present 43 schools, maintained by towns of less than 500 families, to each of which, if it conforms to certain legal requirements and is approved by the Board, the State gives a grant of \$500.

At first thought it would seem that the work of inspection in these cases would be simply to visit the schools; to observe the organization, course of studies and character of the work; to make a complete record thereof; and to report that the State aid should or should not be awarded, as conditions justified.

In practice, however, this simple plan would not work without a great deal of friction.

It is necessary, as is plainly apparent, for the town to equip the school and maintain it for the most of the year before it can be determined whether or not the grant is merited. It does this in confident expectation of receiving the \$500 from the State, which, of course, it has to spend in advance. If, then, it should fail to get the grant, most unfortunate results would be sure to follow. The town would find itself obliged to pay a bill which it did not expect to have to pay, and for which no appropriation had been made. This would give the enemies

of the school — and there always are some — an opportunity, which would not be neglected, to attack those who had brought about its establishment. Strong language would be used, and some of the most progressive people in the town would find themselves greatly discredited.

It will be seen, too, that it might be frequently necessary to refuse the grant, for the teachers in these schools are, as a rule, fresh from college, with little or no experience, and their college training, while leaving them poorly equipped academically to teach a country high school, is a positive injury to them, temporarily at least, so far as the art of teaching is concerned. They are slaves to text-books, and are not resourceful in illustrating and vitalizing what they are teaching. Indeed, they often think they are illustrating when they are only iterating and reiterating the formulæ of the book; they talk too much, and, as a rule, are without skill in the art of questioning, and they have little appreciation of the importance of arousing interest and of stimulating the pupil's voluntary self-activity in the process of education.

These criticisms are by no means of equal and universal application. There are a good many young college graduates who seem to have an innate teaching instinct that has in some way survived; but the facts as I have pictured them are, unfortunately, too common, and as a consequence, if not remedied, the interest of the school begins to lag, and its condition becomes such that to approve it would make State inspection a farce.

It is obviously best to prevent failures in these schools wherever it is possible; and it is almost always possible, for failures in these cases, are, as a rule, due to inexperience and erroneous notions as to educational aims rather than to incapacity. But to secure satisfactory results requires of your inspector two and even three visits, if possible, to some of the schools, that, in co-operation with the superintendent, by suggestions and criticisms, and help in various ways, the work of the teachers and the condition of the school may be made deserving of approval.

The first visit I try to make as early in the school year as possible. It should be said, however, that there are each year some of these schools that do not need the extra visits.

There are many of the schools in the above class that are also

in the second class of high schools that by law have to be approved by the Board, namely, those that receive tuition pupils from towns, for which the State pays either the whole or half of the tuition.

These schools are subjected to a temptation to which, it is a pleasure to say, but few of them have yielded. It happens in this way: as the towns from which these pupils come, especially those that are relieved from all the cost of tuition, have nothing at stake, their school committees have little inclination to refuse approval to pupils who want to go to a high school, no matter how unfitted for high school work these pupils may be; at the same time the high schools that receive them often find it financially profitable to keep them, no matter how poorly they do their work. I say that there have been fewer abuses of this opportunity than were, perhaps, to be expected, but some of them have been quite flagrant. The State should be, as it is, generous with girls and boys of the right spirit, who have a worthy purpose, and who make a good use of the opportunities furnished them; but it should waste no money on those who seem to regard the permission to attend the high school of a neighboring town as an opportunity for an enjoyable daily excursion, the pleasure of which they do not intend to mar by doing any studying that they can avoid. In the last two years a large number of such cases have been brought to the attention of the school authorities of the towns from which the pupils came, and in this way to the attention of parents, with wholesome effects. The slowness of a pupil, provided he is faithful and diligent, does not justify extreme measures, but it seems to me laziness and shirking do.

In the correspondence that has arisen over cases of delinquent pupils, it has been revealed that, with a few exceptions, school committees have not considered themselves responsible for the attendance or the record of pupils from their towns in outside high schools, but have given to these pupils the right to go when and where they chose, and to do about as they chose, if the school which they attended was willing. That this view is entirely erroneous will appear by consulting the first half of section 3, chapter 42 of the Revised Laws, as amended by chapter 433 of the Acts of 1902, which reads as follows: —

A town of less than five hundred families or householders in which a public high school or a public school of corresponding grade is not maintained shall pay for the tuition of any child who resides in said town and who, with the previous approval of the school committee of his town, attends the high school of another town or city. If such town neglects or refuses to pay for such tuition, it shall be liable therefor to the parent or guardian of a child who has been furnished with such tuition if the parent or guardian has paid for the same, and otherwise to the city or town furnishing the same, in an action of contract. If the school committee of a town in which a public high school or public school of corresponding grade is not maintained refuses, upon the completion by a pupil resident therein of the course of study provided by it, to approve his attendance in the high school of some other city or town which he, in the opinion of the superintendent of schools of the town in which he is resident is qualified to enter, the town shall be liable in an action of contract for his tuition. A town whose valuation is less than seven hundred and fifty thousand dollars shall be entitled to receive from the treasury of the commonwealth all necessary amounts, and a town whose valuation exceeds seven hundred and fifty thousand dollars, but whose number of families is less than five hundred, shall be entitled to receive from the treasury of the commonwealth half of all necessary amounts which have actually been expended for high school tuition under the provisions of this section: *provided*, that such expenditures shall be certified under oath to the board of education by its school committee within thirty days after the date of such expenditure. . . .

The last clause is as follows:—

. . . and no expenditure shall be made by the commonwealth on account of high school instruction under the provisions of this section unless the high school in which such instruction is furnished has been approved by the board of education.

Although only the first half of the section concerns the question in hand I have added the last clause to call attention to it later. As to the language of the first half of the section, the criticism has been made that, while it requires the approval of the school committee to enable pupils to go out of town to a high school and have their tuition bills paid for them, it seems to hold a threat over the town if the committee refuses approval. This is in a measure true, and the reason for it may be of interest.

When framing the bill, the late Mr. Frank A. Hill, secretary



of the Board of Education, thought that the difficulties in the way of its execution would come from unwillingness on the part of school committees to grant approval, and his sympathy for pupils who wanted more than their home schools could give them was so great that he strongly emphasized their rights in the matter. In the working of the law, however, it is from the other direction that cause for criticism comes. School committees are even too willing to give their approval, and it is the importunity of parents to have their children pushed along that is the cause of much of the abuse I have alluded to.

The last clause of the section grants all the authority that the State Board has in such cases. That is, it can withdraw approval from the school which abuses the privilege by keeping pupils who are loafing their time away; but this would often work hardship on many other pupils who are making a good use of the same school. It would be better if the law should be so amended that the Board could have authority to deal directly with the individual pupil by withholding tuition in cases of persistent delinquency, after, of course, sufficient trial and due notice. The right would rarely, if ever, have to be used, but it would have a wholesome effect on those who are growing up to think that they are at liberty to waste privileges which the State pays for.

The new rule, granting to high schools the right to certificate their pupils for admission to normal schools, is now increasing the work of high school inspection. Many schools besides those in the two classes already mentioned are seeking this privilege. After the first year or two this work will doubtless become less exacting.

In addition to the work of high school inspection already described, there are special requests from school committees and superintendents to visit their high schools and report in writing, but for want of time I have not been able to respond to more than half of these calls. Invitations from this source have required considerable time in past years, but, with increased inspection for other purposes, it would seem that in the future their number will be greatly diminished.

In all these visitations a careful record is made and kept of the accommodations, organization and equipment of each school. This adds materially to work that must be done evenings and

holidays, but the record is of great value. Moreover, the correspondence arising from the work that I have described is far from inconsiderable; it requires now about every evening, Saturdays and holidays, except in July and August. It is simply impossible at times to answer communications promptly.

## II. CAN HIGH SCHOOL INSTRUCTION BE MADE MORE PRACTICAL?

At the request of the secretary, Mr. Martin, I have given special attention to the question "Can high school instruction be made more practical?" I have tried to make the study of this question fundamental, and I have sought to rectify my own conclusion by inquiry wherever I found an opportunity.

Although we all have a pretty clear understanding of what is meant by the term "practical" as applied to an education, and are probably in approximate agreement thereon, yet I shall take the liberty to make a brief statement of it as it appears to me, in order to bring it into the foreground of thought for the purpose of the present discussion.

By the practical in education is meant the knowledge or training that makes for executive efficiency, and is thus differentiated from what we call the academic or scholastic, which has for its chief aim mental training and culture. In other words, an education is practical when it directly helps one to carry the burdens that circumstances put upon him, or to solve the various problems that life brings him; the academic, on the other hand, mainly tends to furnish an equipment for the sane and wholesome enjoyment of leisure, to cultivate library and art-gallery tastes, so to speak, and to make intelligent companions and citizens.

The education of the farmer as to seasons, crops and soils, and of the carpenter as to tools and how to sharpen and use them, is eminently practical or utilitarian; but not a whit more so than the education of the lawyer and the doctor, which fits them for carrying on the work of their respective professions; or of the banker, whose knowledge of financial affairs enables him to conduct his business safely; or of the statesman, whose knowledge of history and human nature helps him in the management of the State.

At the same time the farmer may have acquired a knowledge

of banking or statecraft that for him is only cultural, or academic, — to keep the word with which we have started, — and the banker may have a knowledge of farming or carpentry, an inheritance, perhaps, from his earlier life, which for him has become wholly academic. It is evident, therefore, that the field of human knowledge cannot be divided by a hard and fast line, so that we can say of one thing, "This is always academic," and of another, "This is always practical." This is true even of manual training. For example, a large part of the manual training at present taught in high schools, if classified by the place it actually holds later in the education of most of those who take it, is really academic. By this I do not mean that there are any who have taken this work who never make any use of the training, as in nailing up a box or whittling out a peg, just as a classical scholar may use his knowledge once in a while to explain the derivation of an English word. But it is not on such incidental happenings as these that a claim of practicability can be based.

To return to our point. It is easier to think of the difference between the practical and the academic than to define it. One can easily see in every well-rounded education, elements that make for general intelligence and others that make for executive efficiency; and in different individuals these elements may be just reversed. I mention these facts to show that the practical value of a subject depends upon its relation to the future of the pupil, and not to any universal property of the subject itself, as is popularly assumed.

It would be impossible to make a course of studies that would be equally practical for all children. It could only be done, provided we knew the future of every child, by making a course for each. The most that can be done in the way of making education practical is to take for granted that the majority of children brought up in certain environments will, in after life, follow certain vocations, and then adapt the instruction more or less to the needs of those vocations. It will be on this assumption that I shall treat this question of making high school instruction more practical.

But before entering upon the discussion let me say that there are two things which should be kept in mind.

First, the purely cultural in education, if such an element is

possible, must not be ignored or belittled. I pity the person who has not absorbed a large amount of it in school. Afterwards, in the work of life, the constant tendency is towards the practical. The cultural will then be too likely to be lost in the rush, unless it has earlier been firmly established in the intellectual tastes and habits.

Second, the practical does not necessarily aim at equipment for a vocation only. In addition to the call for industrial or professional efficiency there are social and civic duties devolving upon us all; and whatever education fits us for good service in these respects is eminently practical.

The greatest danger after all is that, whether a subject is adapted to furnish a cultural or a practical element in education, it may be so taught as to furnish neither, and hence be almost worthless. I fear that this may too frequently appear in the course of this discussion.

Can the instruction in the high school be made more practical? If so, can it be done with the subjects at present found in high schools, or must new subjects be introduced especially adapted to this end?

To pursue the inquiry specifically as to some of the more important of the present subjects, first, can the languages be taught in a way to make the results more practical?

As to Latin, it seems to me that its right to a place among high school studies must largely rest on its cultural value, but by no means wholly. In law, medicine, historical and literary research, in all departments of science, but especially in those subjects whose terminology is based on Latin, — as botany and ornithology, to mention a few of the many, — a knowledge of Latin is of more or less practical value. It is unfortunate, however, that the prevailing method of teaching Latin does not make for the attainment of its full possibilities, either in culture or utility. Scientists complain that the present method of pronouncing Latin is a detriment in science. This is equally true in law, and in every case where a knowledge of the language has a directly practical value. Yet no one, I think, will argue with a straight face that, by pronouncing *i* like long *e*, *e* like long *a*, *c* always like *k*, etc., high school pupils will appreciate the thought and art of Cicero or Virgil better — that is, get

more culture from these authors — than if they pronounced these letters as in English.

Another time-wasting and mechanical detail in studying Latin is to have the pupils learn the “quantity” of all vowels and mark the long ones whenever a Latin word is written. This might be of value to a Latin lexicographer, or to a Latin poet, but for first-year pupils in Latin the study of quantity, beyond what is necessary for proper accentuation of words, is needless and worthless. It burdens the memory and takes up the pupils’ minds with mechanical details when they ought to be acquiring vocabulary, and learning those things that pertain to the expression of thought. It is the thought element in the study that is most ignored. For example, in the drill on paradigms the forms are generally isolated from their meaning, — that is, too little effort is made to associate in the pupils’ minds the forms as they are recited, with their exact shades of meaning. Hence, the drill is almost worthless, for, notwithstanding it all, the pupils do not learn by it to understand or to translate cases and tenses correctly.

To give one other illustration of the neglect of the thought element: no one can appreciate Latin literature who has not learned to feel the effect of the Latin word arrangement. This is the key to its delicate shades of thought, and is undoubtedly the most valuable cultural element in the study of the language. It is also the feature of the language that beginners most readily catch the spirit of, as the writer knows from years of experience. Indeed, if pupils are not brought the first year to feel the force of arrangement, they probably never will. Yet one may say that this feature is entirely ignored, not only in translating Latin but in Latin composition. It is apparently not mechanical enough to attract teachers.

So much is the thought element in Latin ignored that pupils do not get a sufficiently clear grasp of what Cæsar, Cicero or Virgil means to be able to express it in good English. There are many exceptions to this, but this is the rule.

I mention these things to show what it is that is blighting classical instruction, — dwelling on the form and ignoring the spirit. For myself, I believe that Latin can be taught in a way which would make the study far more practical, and far more

cultural also, and that unless this is done the language will soon be following Greek out of our high school courses.

The tendency in the teaching of modern languages is decidedly towards utility, — the ability to understand the languages and to use them. There is no department of instruction in the high school that has a clearer comprehension of its purpose, and is taking a more intelligent way to attain it, than the department of modern languages. Progress is somewhat delayed in places by notions, or, rather, habits of language teaching inherited from the traditional way of teaching Latin and Greek, and by a scarcity of competent teachers, but progress is encouraging. In some of the larger schools, where it can be done, commercial course pupils taking French, have for part of their work literature and composition which deal with the commercial forms and idioms of the language.

There is no subject where the baneful effects of the traditional way of treating Latin are so manifest as in the teaching of English. This is a subject in which, obviously, the instruction should be eminently utilitarian; in which every device used should be intelligently adopted with an eye single to the attainment of these ends — ability to comprehend in the fullest measure possible the literature of the language, accuracy of vocabulary and idiom, and facility of expression and logical arrangement of the thought. So far, however, are these from being the ends always attained that it is not unusual to find a class in literature which cannot read intelligently, or even tolerably, a poem or essay that it has been studying; that, in short, has totally failed to sense the *literary value* of it, while memorizing an enormous amount of detail which does not belong to the high school stage of literary study because it distracts attention from the things that should be most emphasized with high school pupils. There are teachers who treat this subject more rationally, but they are too few.

Composition work is coming to be treated more sensibly, especially as regards the selection of subjects; but rhetoric is introduced prematurely, and is, in my opinion, often productive of more harm than good.

I believe that the instruction in English could be made vastly more practical if we had teachers who could shake themselves

free from text-books and conventional notions, and from the bugbear of "college examinations" that perhaps not one out of ten of their pupils will ever take.

I cannot, in this connection, refrain from calling attention to the sensible requirements for admission in English, adopted by the Institute of Technology, as given on pages 103 and 104 of its last bulletin. I do not know how far similar requirements have been adopted in other institutions, but if they could be made general we might look for a marked reform in treating English. At least, teachers could no longer excuse themselves for mechanical work by ascribing the cause for it to the colleges.

It seems to me that there is ample room to make mathematics much more disciplinary and at the same time more practical. To show how this can be done will require a special report, which I hope some time to be able to make. But in passing from the topic, I am moved to say that geometry, Latin and English literature are the three subjects in the high school that, on account of the way they are treated, seem to fall the farthest short of imparting the valuable educational results of which they are capable.

All the sciences have a great culture value for the student who has learned to enjoy them; they have an even greater utility value. In view of this is it not strange that they are so unpopular with high school pupils? It has not always been so, and that it is so now is due wholly, I think, to the way they are treated. I have, however, discussed this subject at considerable length in my last report, to which I would refer any one who cares to inquire further into the treatment of this work. In my opinion courses in the sciences can be made much more practical and much more popular.

History furnishes us with the story of the past, from which are to be drawn moral and civic lessons that have a value for all time. It is the defect of history teaching that it emphasizes the story only, and too much ignores the lessons. Who has not wondered what becomes of all the historical instruction the schools of the country furnish, so little does it appear to influence the political, fiscal or commercial views of citizens? In this country financial theories that have been proven fallacious scores of times in the experience of the past, have in national

elections carried States, and, more than once, come near electing presidents. In considering questions of civic policy very few citizens make any use of the history they have "learned" in school.

Some teachers seem to fear that if history instruction is made more practical it will be less cultural, when, indeed, it would be more cultural if it were made more practical.

While commercial branches are by no means devoid of cultural value, they are pre-eminently practical, and are at present undoubtedly the predominating practical element in our high schools. I think they always will continue to be so, at least in eastern Massachusetts and in the neighborhood of large cities, where business will be the dominant idea in the minds of the great majority of high school girls and boys who are not looking to teaching or the professions for their life work. Notwithstanding the present manual training in our high schools, very few of their graduates will go into industrial life, unless present indications are deceptive. Commercial courses, more than anything else, have saved our high schools from becoming excessively academic and exclusive.

I have discussed this department of instruction also at much length in the sixty-ninth report of the Board, but shall take the liberty to add here a few suggestions.

The instruction in our business courses in part ranks with the best work in our high schools. It has the advantage of having a well-defined end that awakens a purpose in the pupils who take it. The instruction at present, however, is not equally efficient in all its subjects.

The commercial course is laboring under one serious disadvantage, and in another respect it seems to me not to have fully sensed its opportunity, and for these two reasons its utility value is greatly lessened.

The disadvantage is due to a scarcity of competent teachers. In this particular the supply is not equal to the demand. The chief defect is want of breadth. Teachers who can teach type-writing and stenography well are not especially hard to find, and there are some who can add commercial arithmetic and bookkeeping to their répertoirs, but in commercial geography, commercial law and economics the capable teacher — that is,



one who can teach these subjects in a practical way — is rare. Neither the training of the commercial school nor of the college furnishes a satisfactory preparation for this work. It is true, I think, that all colleges give courses in economics, but one cannot help wondering what becomes of the instruction.

Of course, the difficulty of which I am speaking is very much less acute in large high schools, where the number of teachers in the department makes specialization possible, but in the smaller high schools it seriously hampers the utility of the commercial courses; for no matter what the subject is, its utility value largely depends on how it is taught, — that is, on the skill of the teacher.

In saying that in some respects the high school commercial course seems to me not to have sensed its full opportunity (for practical value, of course), I referred to the way in which some of its subjects are treated.

Those who have formed these courses have, in my opinion, fixed their attention too exclusively on making expert bookkeepers and skillful office clerks. Large high schools, with an adequate and competent teaching force, can and should do this, but it seems to me they should not make this their sole aim, as would, perhaps, be the case in a special high school of commerce.

To show more clearly what I mean, let us take, for illustration, bookkeeping.

In the very beginning the pupils are started in an elaborate course of double entry, adapted to the needs of large commercial or industrial establishments, with all the intricacies in the way of books and commercial papers that such a business requires. How this lessens the general utility of the subject will appear from a little analysis of the case.

There is a certain knowledge of bookkeeping that every one — the farmer, the carpenter, the blacksmith, the professional man, in short, every one with an occupation — ought to have. Every woman at the head of a household ought to be able to keep a systematic account of expenses, and I believe that if this were always done it would prevent a great deal of domestic infelicity.

Now it is very seldom that any of these occupations require an elaborate system of double-entry bookkeeping, but, instead,

only a simple form of single entry. Indeed, this is all that is needed in the vast majority of cases where accounts have to be kept, or ought to be. Moreover, to put pupils destined for such occupations as I have named through an elaborate course in double-entry bookkeeping and all its adjuncts is not only needless, but, in my opinion, a waste of time.

The farmer, for example, needs to know enough bookkeeping to keep accounts with his crops and his customers, but the intelligent farmer needs something else; he needs to know a good deal about physics and chemistry, about geology and botany, about raising and caring for horses and cattle, about insects and birds, both useful and injurious to vegetation, and many other things; and so far as he is, while in school, diverted from studying these, to the learning of a complex, and, for him, impractical system of bookkeeping, his training, it seems to me, is misdirected, and his education will be defective.

Some one may raise the point that the simple form of bookkeeping of which I am speaking can easily be learned by one after leaving school, when he comes to need it. I have no doubt that this is true of a good many things that are taught in our schools; but the one who raises this point overlooks, in the case of bookkeeping, a part of the problem. There are things that are easily learned, but they are not therefore easily and persistently done unless they are transformed by training into habits. Keeping a diary is one of these and bookkeeping is another. There are many diaries and many cash accounts opened the first of January that are closed informally before the first of February. Notwithstanding the knowledge, there is a mental resistance, a procrastinating inertia that brings the attempt to naught. It is, indeed, easy to learn to keep simple accounts, but there is need of extended practice until habit does away with that initial sense of drudgery about it, and makes the doing agreeable and easy. The place to give this practice and to form this habit is in the school.

I have dwelt thus somewhat in detail on this phase of bookkeeping because it is typical, and because it is one that the modern high school commercial course, unfortunately as it seems to me, almost wholly overlooks. I believe that the earlier method of treating the subject was more rational and better for general

high schools than the one now prevailing. It began with some of the most common forms of single entry, taught incidentally how to make bills, notes and checks, how to keep bank accounts, etc. Then followed first the simpler and later the more complex forms of double entry. The latter part of the course had for its aim the training of specialists.

One reason why I say this is better for general high schools is because it furnishes phases of the subject that can be taken profitably as electives by pupils who are not intending to become bookkeepers. At present large high schools offer no instruction in the subject that meets this want. This class of pupils must take either what would be of little use to them or nothing.

This might, perhaps, be excusable in high schools near the large cities, where there always will be a good demand for skilled bookkeepers, but the misfortune is that the small high school thinks it must imitate their methods of treating the subject, or do nothing in it at all, although it is situated in a community that has no use for any but the simpler forms of bookkeeping. For instance, there are now cases in this State where schools situated in communities almost exclusively agricultural are struggling with a system of bookkeeping designed for large and complicated commercial enterprises, — a system that no enterprise in the towns which the schools serve, in any way calls for. The result is that the work is unreal to the pupils, is not well done, and the impression is stamped on the minds of the pupils that bookkeeping is something very intricate and confusing.

If questioned as to this anomaly, the teacher's first excuse is, "It is what they are doing" in this or that city high school; and his second, "Some of the pupils may want to get a position in the city as a bookkeeper," or words to this effect.

In this last statement is revealed one serious fault in country high schools: they are educating their pupils, not to live at home, but to leave home. This, it seems to me, is wrong. The emphasis should be reversed. The assumption should be that the pupils are to be fitted for life in their home towns, and the burden of adapting themselves to conditions should be thrown upon those who go away rather than upon those who remain.

Lastly, is the work in manual training, that is already carried

on in some of our high schools, meeting the need for practical industrial training, and can it be extended?

The work for girls, mainly cooking and sewing, appears to me to be eminently practical. Indeed, one might say that in this respect it is the ideal of all industrial training in high schools. At any rate, it most completely exemplifies the definition of practical education as adopted for this discussion. The reasons for this are obvious.

As to the manual training for boys, attention has been frequently called to the fact, by others as well as by myself, that but comparatively little of it finds its way into the industries, directly, at any rate. If this instruction is to be extended into schools more generally, it seems to me that it could be made more practical if the courses, instead of being copied after one another, could be adapted to the leading industries of the place in which the school is located. This would put the instruction in line with the trend of outside thought and conversation, and would make it far more real to the pupils. It is strange, but it is a fact, however, that, on account of certain unreasonable prejudices, it would be more difficult to get into a school an industrial training adapted to the place where the school is located than one adapted to some other place, or one adapted to no place in particular. This, of course, makes the instruction more or less vague and indefinite to the pupil who is looking forward to a trade. The general training and discipline argument does not appeal to him as it may to an academic student.

There are some high schools, however, that are unhampered by any such prejudices as those mentioned above. They are schools either situated in agricultural communities, or drawing therefrom a large part of their membership. These constitute fully half of the high schools in the State. So far are they from being hostile to such a move, that the people of farming communities would welcome in the high school any instruction which would make more and better farmers.

But what can the high schools do in this respect? It will help us to answer this question if we can first agree upon the elements that are especially needed in the education of a well-equipped farmer, in addition, of course, to the general educa-

tion that is necessary for all. Let us consider what those elements are.

First, the intelligent, up-to-date farmer should know the general principles of physics and chemistry. Of these two subjects, chemistry is of rather the greater value to him, and some special laboratory work in chemistry would be well, but would be of little use in physics.

Second, he should have a course in botany. This course should not deal exclusively with wild flowers, but chiefly with industrial plants of the farm and garden; and not only their forms and structure, but their chemical composition, the kind of soil and of food that they need, etc. He should also know a great deal about the birds, wild animals and insects, both helpful and injurious to vegetation, and means of protection, so far as known, against the latter. Indeed, a knowledge of insect life is of the utmost importance to farmers. Few of them realize this.

Third, he should have as thorough a knowledge as possible of domestic animals and fowls, — how to feed and care for them; diseases to which they are subject; the preventives and the remedies, etc. It will be seen that here is a large field where great intelligence is needed.

Fourth, the farmer should know something of geology and astronomy; the latter, if for no other reason than to enable him to read intelligently the almanac that hangs by every farmer's chimney.

Lastly, the farmer needs training in a simple form of bookkeeping adapted to his business. It may seem a strong statement, but I believe it to be true that more farmers are unsuccessful because they do not know how to keep their accounts properly than because they do not know about soils, seeds and fertilizers; or for any other one cause except shiftlessness, which, I think, would in a measure itself be cured by a training in bookkeeping.

These things I have named seem to me the essentials of a farmer's education, and therefore indicate the subjects that should be taught. I have also named them in the order in which I believe they should be taught, except the bookkeeping, which

should come in the first or second year, with a final course in the last year.

I believe the instruction in botany, and also that pertaining to the care of domestic animals, should be associated with practical work carried on by each pupil at his home.

During the last year, or earlier when the foundation has been laid for them, certain specific processes of value in farming might be treated, such as making butter and cheese, testing different kinds of feeds, testing milk by some of the mechanical processes in use, setting grafts and buds, etc. But so far as these things are undertaken, they should be handled with business-like dexterity and expedition, for the sake of the effect on the character of the pupils. For example, in one instance more than four weeks, or about fourteen lessons, according to the statement of the principal, were spent in teaching the pupils to set grafts. As I was told this I could not help recalling the morning, in the early spring of my fourteenth year, when I went into the orchard with an older brother and in less than twenty minutes learned the usual ways of grafting, and of over a thousand grafts that I set that year I lost only five or six. In another fifteen minutes one day I learned to bud certain kinds of trees. It is not, as it may seem, boastful to mention this, because almost any boy of my acquaintance could have done the same. With a course in botany such as I have suggested as a preparation, one lesson at the most should have sufficed to show the process, and then the pupils might have been asked to set somewhere fifty or sixty grafts each and report results.

The mechanical manipulation of a Babcock tester ought to be mastered by a person of average ability in two hours, and by one prepared for it by some knowledge of physics and chemistry in half that time. To spend five or six weeks on it in a high school, without even then touching the physical and chemical principles on which the instrument works, is to teach pupils not to work but to dawdle, and the bad habits and the false notions of effort and duty they will acquire will more than offset anything of value in the instruction. It would be putting the stamp of school approval on an already too prevalent notion, — that one is justified in taking work very leisurely when the expense is met by the public. Another bad result is that feeble

effort here soon extends to the other work of the school, and dilettanteism everywhere prevails.

There is enough to be done without frittering time away. To suggest one thing, it seems to me that, after a knowledge of chemistry has been acquired, instruction in the process of making denatured alcohol out of cornstalks, unmarketable potatoes and other suitable products of the farm might be given. I doubt very much whether any one New England farm has enough "waste products" suitable for this purpose to make the setting up of the necessary apparatus profitable, but possibly all the farms of a district might. We are told that the farmers in some parts of Europe add materially in this way to the income from their farms.

If what I have said is sound, it follows that if a course in agriculture is to be introduced into any of our high schools which is to be of any practical value it must have a substantial basis of preparatory knowledge to rest on, and must demand hard, earnest study on the part of the pupils, with much individual experimental work at their homes. Learning desultory mechanical processes that could be learned in less time at home will not satisfy the need. These may be valuable, and they may be interesting, but they do not constitute a well-rounded and complete training for a farmer.

Respectfully submitted,

J. W. MACDONALD.

JAN. 1, 1908.





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APPENDIX C.

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REPORT OF JULIUS E. WARREN,  
AGENT OF THE BOARD.

WHAT CAN THE PUBLIC SCHOOLS DO TO IMPROVE INDUSTRIAL  
CONDITIONS?

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# REPORT.

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*To the Board of Education.*

During the year ending Dec. 31, 1907, I have inspected schools, addressed teachers' and general public meetings and conferred with committees and superintendents in most of the superintendency districts of the State. I have conducted 7 institutes, attended by 720 teachers from 69 towns. At the suggestion of Secretary Martin, I have made as much of a study as my time would permit of the problem of industrial education in village and rural schools.

The educational and ethical value of industrial education has been much discussed in recent years. Little, however, has been said of its economic and social importance to rural communities. The conditions existing in these communities are an eloquent plea for industrial teaching in the public schools.

The population of Massachusetts was 1,231,022 in 1860, and 3,003,680 in 1905. In this time the value of the real and personal estate has risen from \$897,795,326 to \$3,312,255,163. Notwithstanding the increase in population of 240 per cent. and in wealth of nearly 400 per cent., there are 143 towns in which there has been a loss in population. Some of these towns have less than one third and many less than one half their former number of people. This decrease of population and wealth is not confined to any one section of the Commonwealth.

Worcester County is one of the best grazing and farming sections of the State, yet it has sustained a loss in 24 of its 59 cities and towns. Many of the towns of the Connecticut valley, the best agricultural land in New England, show a decided decrease in population.

One of the valley towns of Hampshire County, with a fertile soil and easy access to markets, aggregating 170,000 people, has lost 15 per cent. although there has been within a few years so large an influx of Poles that they now constitute one third of

the population. There are 32 other towns in which there has been little change in population. So it may be said that 175 towns, or nearly 50 per cent. of the towns of the State, have not shared in the prosperity and growth which the last generation has witnessed.

Two counties show a decrease in population. The 15 towns of Barnstable County have but little more than two thirds of the population of forty-five years ago.

This shifting of population has occurred in spite of the fact that the products of the farm have risen in value, whether the value is measured in money or in other commodities.

The young people have gone to the cities. The rural communities are suffering from their absence. Some of the young people have achieved success, a few eminence, in the various fields of human activity; the great majority would have been better off if they had stayed in the country. Our system of public instruction is in a measure responsible for the drift to the cities. The schools have belittled country life and good, honest, manual labor. Too many boys have grown up with the idea that it is better to be a clerk at from \$6 to \$12 a week than to be a good blacksmith at \$20 a week, or even to be a free and prosperous farmer. There is some truth in the charge that the apparent aim of the schools has been to make clerks and book-keepers.

I recently visited a farm in the Berkshires which interested me much. The buildings were well painted, commodious and attractive. There was a large orchard, with a variety of fruit. There were two mail deliveries daily. A telephone gave instant communication with the neighbors and the great outside world. A daily paper and the latest magazines were at hand. A ten horse-power gasoline engine sawed the wood, threshed the grain and cut the fodder for the cattle. There was a mowing machine, a horserake, a hay tedder, a horse fork for unloading hay, a sulky plough, seeders, harrows, cultivators and a horse hoe. Good crops of corn and potatoes were raised without the use of the hand hoe. Machinery enabled one man to do the work of ten men. Science and education had done much to refine the occupation and to lessen the labor of the farmer.

The milk, butter, pork, poultry, eggs, vegetables, fruit and

lumber raised on the farm found a ready market at high prices in a near-by city. Everything indicated comfort and prosperity. An Englishman would look upon this "estate in the country" as an ideal home; it would be his pride, and he would seek to keep it in his family from generation to generation.

The farm was then supporting one boy at college and two other sons, — a young lawyer and a young doctor who had not yet established themselves in the practice of their professions. The boys had been sent to the city high school. There they had been educated, away from the healthy, independent, vigorous life of the country. The chances are that at least two of the boys would be happier, better off financially and live longer in the country. Their town sorely needed them.

Sociologists agree that the concentration of population in a few large cities is objectionable from every standpoint. We cannot be indifferent to a lessening in the number or a lowering of the character of the farming population. It is of vital importance to the State that sound and healthy conditions be maintained in the country towns.

As industrial conditions largely determine the intellectual, moral, religious, social and political life in any community, industrial improvement must be the key to rural betterment. The door of hope must be opened. The income of the average man must be increased. A higher standard of living must be made possible if the energetic young men and women are to be kept in the country.

The public school should recognize its responsibility in this matter. It should teach the advantages of country life. It should do all in its power to dignify and render attractive and productive the industries of the country.

Something is being done in this direction in a number of places. More or less elaborate courses in agriculture, manual training and domestic science are being attempted. More has probably been accomplished at Petersham than anywhere in the east. In describing the Petersham school I wish to go into considerable detail to make it clear that there is nothing exceptional or especially favorable in the circumstances under which the experiment is being tried.

The kind of industrial training given at Petersham may be

taken up in any town, large or small, with such adaptations and modifications as the peculiar need of the locality may require. The population of the town is 855. The assessed valuation is \$676,284. The 1905 school census reports 140 children between the ages of five and fifteen years. About 125 of these children attend school at a central building; a number are transported at public expense. The schoolhouse is a modern, well lighted, heated and ventilated building, containing four class rooms, a recitation room, an assembly hall, and rooms fitted up for cooking, lunch and recreation purposes. A high school uses one room and three grades occupy each of the other class rooms.

The high school complies with the Massachusetts requirements and receives State aid, as it has "two teachers of competent ability and good morals," continues for forty weeks in the year, has suitable apparatus for teaching the sciences, and prepares students for the higher institutions of learning. The principal has been trained to teach agriculture, and one assistant to teach domestic science. Five teachers are employed in the building. Special teachers of drawing and music visit the schools weekly, give a lesson in each room and plan work in these subjects for the regular teacher to carry on during the week.

The nature teaching in all of the grades is simple, definite, accurate, and directly related to the lives of the children. The aim is to develop a love for nature, to open the eyes of the pupils to the beauty of their surroundings, and thus to increase their capacity for enjoyment.

The older pupils study soils, the kind of soil needed for certain crops, the effect of a rotation of crops, the means of fertilizing the soil, the selection of seed, the plant life of the town, insect pests and local problems, including a simple system of farm accounts.

A greenhouse built by the boys is a laboratory for plant breeding and culture. The cost of the material was about \$120. The pupils are taught the care and management of a greenhouse, of hot beds and cold frames. This is a vocation in itself. The cultivation of greenhouse flowers and plants for resetting may be made profitable in the urban sections, and the raising of greenhouse vegetables and small fruits may be made lucrative anywhere in the State.

The secretary of the State Board of Agriculture tells of a bushel of cucumbers raised in a Massachusetts greenhouse which sold in the New York market for \$15. This is a larger return than the average western wheat field gives per acre.

The pupils conducted a large school garden. They raised and sold 140 bushels of potatoes and a variety of other vegetables. This gave the pupils an interest in and an elementary knowledge of market gardening. The possibilities of market gardening are not generally understood.

Mr. J. Lewis Ellsworth of Worcester raised in one year on an acre of land a crop of spinach, a crop of lettuce and one of celery. The three crops brought him nearly \$800. Everything was sold to wholesalers. Had he sold directly to the consumer the receipts would have been much larger. Mr. Henry M. Howard of West Newton sold \$10,000 worth of produce from a ten-acre market garden in one year.

The average farmer does not know how to manage a market garden. He and his boys may be taught much of this knowledge in the public schools.

Massachusetts is one of the most densely peopled parts of the earth, yet with intensive cultivation her soil will entirely support three times the present population.

The boys at Petersham have been taught to prune, bud, graft and spray the orchard. They have read government reports, text-books and all the available material bearing on these processes, thus supplementing their own practice with the experience of the world in these matters.

Apples grown in the Oregon valleys sold at public auction last fall for shipment to eastern cities at \$3.40 a box. Each box contained a little more than a bushel. The orchard lands in that State are rated as worth from \$800 to \$1,000 an acre. As good prices can be obtained for Massachusetts apples if the trees are sprayed, and the fruit sorted and packed so as to establish a standard of excellence. No part of the world is better adapted for that kind of fruit culture than the apple belt of Massachusetts. The man who grows bigger and better apples and more of them, or who teaches others how to do this, is a public benefactor. He is doing much to improve industrial conditions. This instruction might profitably be given in 275

towns of the State. Trees by the roadside, or those in near-by orchards, would be available for practice.

A Babcock tester has been used in the school. Any milk brought to the school is tested for butter fat and solids. The machine presents many interesting problems to the student. The chemical action of the sulphuric acid on the milk, the centrifugal force which separates the fat by throwing the heavier parts outward, the relative specific gravities shown in the floating of the butter fat, the gearing for speed, and the principles involved in the construction of the machine, offer opportunities for skillful teaching and thoughtful study. The chief value of the Babcock tester, however, is in detecting and weeding out the poor cows. The machine in a size suitable for school use costs \$5. It might well be added to the equipment of most high schools. The high schools might also aid the dairying interests by a study of the economic conditions of the industry.

Twenty years ago grain was so cheap that farmers formed the habit of buying grain and raising only the coarser fodder. Now that grain has nearly doubled in price the farmers must raise more fodder and feed less grain if they are to continue in the dairying business.

The boys in Petersham found the pine seed in the cones. They have learned how to plant that seed, reset the little pines and start the forests in the rugged lands which are unfit for cultivation. Lands with a flourishing growth of white pine are good long-term investments and are salable at any stage of growth. The State Forester estimates that such lands will pay 6 per cent. compound interest on the capital invested.

Poultry keeping might well be added to the subjects taught at Petersham or elsewhere. A scientific poultry keeper informs me that his average profit from a flock of 300 hens has been \$750 a year. The eggs and chickens were sold in a distant market at standard prices.

Trout raising properly managed is also very profitable. There is a practically unlimited demand for trout for the table at a dollar a pound. Even the eggs and the smallest trout find a ready market. One of the most successful Massachusetts superintendents believes that he can make more money in trout raising than in his professional work.



As the school at Petersham develops, it is designed to teach the boys the use and care of tools, and to fit them to do much of the repair and construction work on the farm. They will be taught to repair harnesses, to work in wood, to weld iron and to temper steel. The equipment for this work will be inexpensive. A small forge and anvil can be placed in the basement. Work of this kind has already been started. It is practicable to work in wood, leather, metal and paint in any high school.

The girls have courses in cooking, sewing, laundry work and the care of the house. These subjects are not now taught as they should be in the home. The principal of one of the State normal schools reports that very few of the girls on entering the school know how to do plain sewing.

A girl who is taking the domestic science course at the Framingham State Normal School asks upon her return home Friday night that she be *allowed* to prepare the family dinner. Think of it, *allowed*. The school has interested her in the simple, useful, necessary duties of the home. She is happy performing them. Housework is no longer drudgery to her.

This attitude of mind is a complete justification for industrial education. The moment any industry is made the theme for instruction that industry is dignified in the eyes of the pupils.

At Petersham the industrial subjects have not interfered with the academic work of the high school. The last hour and twenty minutes is given to industrial teaching. The academic work has not been slighted. The two have gone hand in hand; each has helped the other.

The standard of the written English of the school has been much above that of the ordinary high school, for the students have written on "The milk industry," "Farm machinery," "The call to the farm," "Corn," and other topics in which they were interested and of which they possessed a first-hand knowledge, founded on their own investigations. Several papers have been written on these subjects which were good enough for publication, and some of them by students who had never before done creditable composition writing.

The application of the principles of physics and chemistry to every-day problems has lessened the difficulty of teaching these

subjects, but it has made them immensely more valuable to the pupils. Capillary attraction means more, even to the city boy, if he discovers capillary tubes in the soil and understands the influence of these tubes upon the retention of moisture and the growth of plants, or if he is led to see that capillarity is the chief cause of the circulation of sap in plants.

It is too early to attempt to tabulate the results of the Petersham experiment. The school is only a year and a half old. It is evident even now, however: —

First, that unusual interest is felt in the school by pupils, parents and the public. This interest has been manifested in the contribution of \$120 for the purchase of the material for the greenhouse, and \$96 for the equipment of the cooking department, and in other ways. Nearly \$600 has been given the school for industrial purposes.

Second, that a number of pupils between the ages of fourteen and eighteen are attending the school who would not be sufficiently interested to stay in the ordinary high school. They think that they are getting something out of the school to increase their earning capacity. The vocational spirit has been aroused. These pupils, attending the school because of the industrial teaching, are getting good courses in English, science, mathematics and history.

Third, that by introducing the intellectual element into industry farming has ceased to be looked upon as degrading, and has become in the minds of the students a fascinating and delightful occupation. They are gaining faith in farming as a business. Instead of trying to get away from the old farm as soon as possible, they are planning improvements, and looking forward to a happy and prosperous life in the home community.

Fourth, that the attitude toward manual labor is changing. The boys built the greenhouse themselves. There was no talk about the dignity of labor, but they put on their overalls, rolled up their sleeves, dug stones, threw out the earth and did practically all of the work of construction.

Fifth, that the Petersham experiment has proved that it is possible in the public schools, without striking out anything good in them, to give a vast amount of usable knowledge relat-

ing to industry, and to train to some degree of skill in using this knowledge.

Thirty-five or forty years ago there was a school at Harwich where navigation was taught. The Cape Cod boys went mackerel fishing summers as soon as they were fourteen or fifteen years of age. Winters, they attended a school kept by one Sidney Brooks. There they learned, in addition to the usual subjects, how to reckon latitude and longitude, how to make and read charts, the kind of geography especially helpful to sailors and the management of the ships of that day. At twenty-one these boys were "able seamen." With the passport of approval from Sidney Brooks many of them became masters of vessels. A few of those boys are still commanders of some of the finest ships afloat. That was almost an ideal industrial school. The academic subjects were made practical by their direct application to the industry in which the pupils were interested. The spirit of the school served to uplift and dignify and ennoble the sea-faring life. It is to be hoped that navigation, the forms of agriculture adapted to that section of the State and other local industries may soon be taught in the public high schools of Cape Cod.

Much can be done in the common schools to develop and utilize the natural interests which all children feel in the occupations of the people about them.

Bulletin 186, United States Department of Agriculture, entitled "Exercises in Elementary Agriculture," presents an excellent course of study, with many experiments, names books of reference, and offers many practical suggestions for teaching the leading occupation of the country. This very valuable document can be obtained by addressing the Agricultural Department at Washington. Any teacher who is interested in the subjects can do effective work with this pamphlet as a guide.

A teacher does not need a profound knowledge of industry to begin this kind of instruction in the common or even in the high schools. A man who appreciates the importance of industrial education, and grows in knowledge and develops with his pupils, will often get better results than the expert, who is far ahead of his community. The teacher may increase his knowl-

edge of the subject by conferring with successful agricultural specialists, by a study of text-books and government report, and by attendance at the summer session of the Massachusetts Agricultural College.

A good training in the teaching of domestic science is now being given at Simmons College, at two of the State normal schools and at a number of other institutions. It should not be difficult to find a teacher for a small town who would give part time to sewing, cooking and laundry work, and do good teaching in the usual common or high school subjects for the remainder of the time.

To summarize, industrial education elevates manual labor, dignifies industry and makes for efficiency in life. Profitable industry must be the basis of advancing civilization. The running of a greenhouse, market gardening, dairying, fruit growing, poultry keeping, forestry, trout raising and many other phases of rural industry are exceedingly profitable, and they are all vitally connected with the social welfare. The public schools can interest the pupils in these subjects and furnish sufficient instruction to make possible successful and attractive careers upon the farm.

The State might wisely stimulate the movement toward industrial improvement by direct financial assistance to towns supporting satisfactory courses in agriculture and mechanic and domestic arts in their public schools.

Respectfully submitted,

JULIUS E. WARREN,

*Agent of the Board.*

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APPENDIX D.

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REPORT OF FREDERIC L. BURNHAM,

AGENT OF THE BOARD

FOR THE

PROMOTION OF MANUAL ARTS.

INDUSTRIAL EDUCATION IN THE PUBLIC SCHOOLS.

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# REPORT.

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*To the State Board of Education.*

I submit herewith the twenty-ninth report of the agent for the promotion of manual arts. I entered upon the work Jan. 1, 1907.

Number of cities and towns visited, . . . . .	160
Number of addresses given, . . . . .	152
Number of visits to normal schools, . . . . .	26
Number of addresses at normal schools, . . . . .	24
Number of addresses at institutes, . . . . .	50
Number of institutes attended, . . . . .	24

Conferences were held with supervisors at Gardner, Ayer and Taunton. Five weeks were spent at the summer session of the Hyannis Normal School in organizing and observing the work of a class in industrial education. One industrial institute was held at the Massachusetts Normal Art School, in Boston, December 13. Twelve Saturday mornings, from 9 to 12 o'clock, were spent with the public school class of the Normal Art School, giving lessons on subjects pertaining directly to the art of teaching.

Number of supervisors of drawing in the State, . . . . .	168
Number of manual training teachers, . . . . .	59

This report is written to present as clearly as possible some of the work which is already being done in the public schools of our State along industrial lines; and to suggest in what ways more may be accomplished; and why the work is beneficial to the child and to the State.

The following lists give some of the articles made by children on their desks, with simple equipment: —

## FIRST GRADE.

Materials used:—splints, pegs and tablets.

Articles made by arranging these on the desk: pails, brooms, dust-pans, stoves, tubs, tables, clocks, lamps, baskets, stools, carts, doll carriages, boats, houses, swings, ladders, drums and tools.

Articles made by paper cutting and folding:—Many of the above, and boxes, bird cages, shovels, sleds, umbrellas, soldier hats, stockings, flags, tents, beds, fireplaces, cupboards, tablecloths and napkins, jack-o'-lanterns and stars.

These articles are used in connection with the teaching of other subjects, as illustrative story telling, etc. Application of simple ornament to many of the objects is also taught.

## SECOND GRADE.

Paper cutting, folding and pasting. Including the work of first grade, cutting of letters, making furniture for doll houses, Christmas cards and valentines, figures in action, etc.

## THIRD GRADE.

Use of ruler; measuring by inches and half inches.

Simple geometric figures.

Making copy books, boxes, booklets, sewing bags, envelopes, book-marks, calendars, weather records, transparencies, patterns for ruler work. Weaving toy blankets, rugs and hammocks.

## FOURTH GRADE.

Ruler work: measuring by inches, half inches, and quarter inches.

Cutting geometric shapes:—square, triangles, etc.

Planning, measuring, cutting and pasting boxes of different sizes and shapes. Ornamenting same.

Measuring and making miniature cardboard houses, copied after places of historic interest.

Designing and making burlap and crash school bags.

Raffia work, simple baskets, picture frames, boxes.

Making some type solids from cardboard.

## FIFTH GRADE.

Use of knives in decorating woodwork:—trays, bowls, pin trays, match-boxes, etc.

Mechanical drawing:—use of compasses, simple working drawings, measuring and making doll houses.

Raffia and reed baskets and boxes.

Lettering:—covers and cases for school work.



## SIXTH GRADE.

Making pasteboard boxes.

Knife work on wood.

Leather and metal work:—simple bookbinding.

Making relief maps.

Stencils for draperies and cushions.

Sewing for girls, and shop work for boys.

Weaving jute rugs.

## SEVENTH AND EIGHTH GRADES.

Reed and raffia work.

Sewing and simple embroidery.

Book racks from wood, designed and ornamented.

Manual training, which varies from sloyd models to original work, such as simple furniture for the house.

Lettering and initial letters.

Mechanical drawing; using T square, triangles, compasses and ruler.

Designing and making booklets for school composition, lamp screens from paper, brass and copper.

## NINTH GRADE.

Articles in leather:—cardcases, belts, pocketbooks, telephone call cards.

Articles in metal:—trays, hinges, lamp shades and watch fobs.

Articles in weaving:—rugs, table mats.

Articles in fabrics:—table and bureau coverings, sofa pillows, mats, collar and cuff sets, bookcase curtains.

Mechanical drawing:—simple house plans.

Designing and making of booklets:—cover, frontispiece, tailpiece, lettering for title and initial letters, arranging written matter in proper form. Designs for surfaces.

## HIGH SCHOOL.

Leather work requiring careful measuring, tooling and ornamenting:—cardcases, book covers, pocketbooks, magazine covers, table mats, purses, watch fobs, sofa cushions, calendar mounts, telephone cards, corners for blotter pads and book-rack ends.

Metal work:—use of tools, designing brass, copper and silver trays, match and stamp boxes, inkstands, blotter corners, letter files, lamp and candle shades, sconces, lanterns and candlesticks, belt buckles, enameled buckles, hatpins, paper knives, necklaces and pendants.

Fabrics:—drawn in rugs 2½ feet by 4 feet, cushions, window draperies, table and bureau covers, embroidered waists, collar and cuff sets.

Wood:—book racks, boxes and trays.

The above work is in no sense universal in the State, nor typical of any one place, although more is done in the primary than in the grammar grades. Not a few grammar and high schools make no attempt whatever to teach the manual arts.

When it is realized that in many schools, particularly those where no time is set aside for manual training, the work has to be done in the short period allowed for drawing; and when we recall the fact that all the other phases of manual arts must have their share of the time, — unless it is done as seat work or after school hours, — we can readily see that it becomes a matter of some skill to profitably arrange the course of study. But whatever is done, the *amount of time* given to drawing should not be lessened; rather, it should have such a bearing upon the industrial work as to make it indispensable. At present about one quarter of the time given to drawing during the year is used for the construction of simple objects. This is classified under the title of industrial education. The limited period allotted is insufficient for the accomplishment of the best results. A marked improvement is observed in those cities and towns where manual training is recognized and given its place in the curriculum. The work is, to a degree, cultural and practically utilitarian, the constructive activities of the child being trained as well as his judgment.

A careful study of the given lists will reveal the fact that the work is designed to reach and influence, both in city and town, the school, the home and the various artisan interests. The daily occupations of life have their place, and thus even the homelier industries as well as the higher forms of labor are ennobled and discovered to the child. He is also made acquainted with some of the modes of transportation on land and sea; the various ways, in different countries, of sheltering people and animals are brought to his attention; and even through simple paper constructive work in the lower grades the child may learn something of the administration of civic affairs. Thus it will be seen that the interests of others are mainly considered, a less proportion being devoted to the child himself. It is not possible to acquire much technical skill in the public school, but the most valuable result to the child is that he is

taught to observe things carefully and is also given some practice in making them.

The majority of supervisors have been trained to direct and teach only free-hand, mechanical drawing and design. While no one will question the value of this, there needs to be a broader training. On the other hand, there are supervisors of manual training who understand shop work and mechanical drawing but have little knowledge of free-hand drawing or of design. It is an encouraging fact that attempts are being made by both parties to co-ordinate the two departments of drawing and manual training. As a result, recent exhibits show that gain has been made on both sides, namely, in more artistic workmanship and in more carefully executed drawings.

At the summer session of the Hyannis Normal School of the year 1907, a class, consisting of superintendents of schools, supervisors of drawing, and one teacher of manual training, was organized to do shop work and study the industrial problem. The course included work in wood and metal, and the study of the history of education. Free discussions were held daily, for interchange of thought and experience. The results were satisfactory as the beginnings of a movement to gain the right point of view, as well as to secure the necessary knowledge to introduce and carry forward industrial work in our schools. The course has been planned to continue through three seasons of the summer school. Psychology and pedagogy will be studied in connection with the shop work in the second and third years. An excellent opportunity is thus afforded any supervisor to gain a practical knowledge of the manual arts along industrial lines.

It was not expected of the youth of former times that he should be able to select the particular business or occupation which he was to follow for life. In the old apprentice system no question was supposed to be raised by the boy or girl. He was set to work to learn his trade and to understand its various details. He was obliged to satisfy his master. When he finished his apprenticeship he was thoroughly competent to perform any part of the work required. The apprentice knew little of any other business, but the kind of intelligence he did possess gave him the power to realize what success in any enterprise depended

upon; namely, work well planned and carefully executed. If he was to prosper, his work must be the best of its kind.

This training, one sided as it was, is what we need more of in our schools to overcome the deficiency which is felt in the present system. In learning a trade to-day one is invariably confined to a single part of the work, and not afforded an opportunity to learn any other part of the business; and furthermore, too many do not have sufficient ambition to seek to alter these conditions. Because of this the industrial training in our schools should be of such a nature as to inspire a desire on the part of every boy to make the most of his opportunities. It seems desirable that the youth when graduated from the high school should have a like attitude of mind towards labor as that which characterized the blacksmith, carpenter and mechanic when they had finished their apprenticeship. They should know something of what work means (1) in hours and minutes, (2) in muscular power, (3) in thought, (4) in simple technique, (5) in ingenuity, (6) in ability to take the initiative, and (7) above all they should know the dignity of labor.

The apprentice of former days did not have the opportunity to learn to appreciate scholarly attainments, as does now the student in the high school, or even in the grammar school, yet oftentimes the former became an influential man in the community. Because he lacked that kind of knowledge which the professional man had, and because the latter had little sympathy with the work of the laborer a serious misunderstanding arose, and a dislike one for the other often followed. The same lack of mutual appreciation exists now between the two classes. It is not that too much attention is given to those studies which are considered the most suitable to educate the pupils along professional lines, but too little time is allowed for that training of the hand which enables a man to understand and perform the ordinary tasks which come in every-day life, whether in the home or in the business world. It ought to be possible for the public school to give such industrial training as is necessary to foster a wholesome respect and regard for the craftsman, that more may elect to follow a trade, or to live on the farm. Thus the question is forced upon us: How shall we cope with this lack and obtain for our boys and girls the desired training?

1. Select in our present system that which has proved of value and make it more universal.

In the more progressive communities industrial training has become an important and recognized part of the school course. It should be taught in every locality. The first factor in procuring satisfactory results is a good teacher. There should be more of that kind of mechanical drawing which ensures the practical ability to make and to read working drawings. We need nature drawing of two kinds: (*a*) pictorial representation; (*b*) analytical delineation of nature's forms. Object drawing should be more universally taught from the pictorial and structural standpoints. Design both abstract and relative to construction and ornament, is necessary. Training in the use of common tools, as the square, two-foot rule, saw, hammer, file, chisel and plane, is important. Better care and decoration of the schoolroom and grounds should be attempted.

2. Make it possible for children to work naturally, and at occupations which shall embody the elemental life principles.

School problems may just as well be planned to harmonize with the needs of life and not be simply a series of exercises. Gardening, housekeeping, care of the schoolroom, making picture frames, shelves for plants and books, boxes for rubbers, and racks for umbrellas, a place for lunch boxes and pails, — whether they suggest work for the rural or city school, emphasize the fact that in any home or school may be found numerous problems of high educational value.

In a large city, the industries in the different sections should be thought of in planning the school work. For example, leather might be used where shoes are manufactured; pasteboard if boxes are made; and designs for prints and weaving where cotton or woolen mills are the chief industry. If apparatus is needed for the teaching of science no better opportunity can be afforded for consistent industrial education. Due attention should be given to furnishing an equipment for games and sports, such as the making of bats, bean-bag boards, baskets for basketball, goals for football, etc. All this should center around, grow out of, or be governed by a carefully planned system of industrial education.

3. Suit the problem to the age and ability of the child.

For the sake of results, so called, children are sometimes led to attempt that which is beyond their capacity or ability to accomplish.

Personal interest lends enthusiasm. Two young children were playing house; there were toy chairs and large chairs at their disposal, but none were fitted to their use. They wanted to make chairs for themselves. The opportunity was given, and, full of interest, they hurried to the work shop, where were to be found simple tools and boards, common in every home. Wishing to see what would follow, the children were watched. First, a board was selected which seemed wide enough for a seat. Each child sat on the board, and with a piece of crayon marked on either side of himself the necessary size of the seat. Knowing that a saw would cut through the board, they each found one, and by imitating their elders in using a square to draw a line across the board, they clamped it to the side of the stairs and began. An opportunity was taken just then to give a little simple instruction on the use of the tools. Although both children became weary before they had finished the sawing, because of their great interest they persevered and finished the work. To determine how long the legs of the chair should be, one child held the board under him after taking a sitting posture and the other measured from the board to the floor with a stick. Then was the time to teach the use of the ruler; and after finding a piece of wood for the legs the children measured the required number of lengths and sawed them. It was less work to hammer the nails which fastened the legs to each corner of the seat, and the interest did not lag until the stools were finished.

This illustration may serve as a suggestion for one kind of necessary problem, for if we analyze it we discover, (1) an interesting problem; (2) a dependence upon past experience, inasmuch as the children knew the use of some tools; (3) a good plan of procedure; (4) a love of ornament; as later the stools were painted.

Nothing delights a child so much as to see a thing he has personally made, and the interest which accrues by performing such tasks will often awaken a spirit that might otherwise be dormant for years.

4. Pay more attention to muscular control.

Too much of the constructive work of the lower grades develops only the smaller muscles. The intermediate grades have made baskets and other articles which were too fine, and which took a longer time to finish than was commensurate with their educational value. Larger baskets, of coarser materials, would be better, tax the nervous energy less, and demand the use of the arms and body rather than the fingers only.

5. Study local conditions and industries.

At several places in the State local conditions are influencing the work. In one town there are two large printing establishments, where many of the parents are employed, and where some of the children help occasionally. The manual arts course in the schools has been arranged to include the making of various articles relative to bookbinding, such as measuring, cutting, pasting papers and cardboards, blotter pads, pocket memorandum books, pencil cases, portfolios, pamphlets and booklets.

Regular courses cannot be set aside, as each has its definite purpose. If things too difficult are attempted they will encroach on time allotted to other studies, and so become impossible for the schoolroom. Be sure that every problem is worth the attention it receives. If we are seeking to simplify other forms of industry, as the bookbinding has been, we will find that box making, rug making, weaving, toy making, furniture and metal work may all be adapted to the schoolroom.

6. Let the work always be truthful.

The child is quick to detect a sham. Although he is willing to accept assistance, he needs to be given standards by which he may measure and understand his work. Any teacher who helps by finishing the child's product, and then allows such results to appear in exhibits, is deceiving the public and giving the child a wrong training for life.

I would like to suggest, in closing my report, three methods of teaching which seem to me of great value. Each has its place, but should not be used to the exclusion of the others.

1. By dictation. Without question this form of teaching is indispensable. It is used largely in connection with the making of models, but sometimes characterizes too much of the regular teaching.

2. By giving a definite problem with its limitations. To illustrate: — give each child in the class a certain amount of material, out of which he is to construct the article desired, but allow him to make it according to his own plans.

3. By undertaking to solve a problem arising from some home or school need. This will call for careful planning on the part of teachers and pupils, and admits of correlation with other subjects.

(1) There must be interest in the work.

(2) Discussion determines the materials to be used.

(3) Definite information is obtained by means of communication with merchants.

(4) Make preliminary plans to determine the limitations of the material and the amount required.

(5) Whether the material be purchased by wholesale or retail. How paid for.

(6) Economical distribution of material.

(7) Perfected plans, with due consideration for beauty of structural lines and proportion.

(8) Consideration of necessary tools.

(9) Making the article.

(10) Design and apply ornament.

Respectfully submitted,

FREDERIC L. BURNHAM.

JAN. 1, 1908.



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APPENDIX E.

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THE FUNCTION OF NORMAL SCHOOLS  
IN  
PROMOTING INDUSTRIAL, AGRICULTURAL AND  
DOMESTIC EDUCATION.

REPORT OF A VISIT TO NORMAL SCHOOLS AND  
OTHER INSTITUTIONS OF THE MIDDLE  
WEST AND ONTARIO.

BY  
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PRINCIPAL OF THE STATE NORMAL SCHOOL AT NORTH ADAMS, MASS.

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## THE FUNCTION OF NORMAL SCHOOLS IN PROMOTING INDUSTRIAL, AGRICULTURAL AND DOMESTIC EDUCATION.

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*To the Board of Education.*

Under the direction of the Board of Education a study was made during the month of May of industrial, agricultural and domestic education in the middle west and Ontario, to determine more definitely what should be the function of normal schools in promoting these movements. To this end visits were made to State normal schools, institutions providing special normal courses, agricultural colleges, high schools, trade schools and manufactories.

In the following comments the term elementary manual training includes paper and cardboard construction, weaving with various material, pottery, bent iron and sheet metal work, whittling, bench work on wood, bookbinding and leather work. The term advanced manual training includes difficult bench work with wood, machine work on wood and iron, molding and forging. Domestic science includes cookery, sanitation, furnishing, etc. Domestic art includes sewing, dressmaking, millinery, etc. Drawing is considered a necessary feature of each department.

### NORMAL SCHOOLS.

Visits were made to State normal schools at Oswego, N. Y.; Kirksville, Mo.; Oshkosh, Wis.; to the Dunn County normal school (the State now pays two thirds of the current expenses) and the Dunn County School of Agriculture at Menomonie, Wis.

*Manual Training.* — No one of these schools requires a thorough course, if any, in this work. All the schools offer optional courses in some forms of elementary manual training. Three schools offer courses to prepare special teachers of elementary work, and two offer advanced courses to prepare departmental teachers or directors of manual training.

The largest equipment includes three shops, — the children's shop, supplied with individual benches and tools; the normal students' shop, furnished with individual benches and tools, lathes and scroll saw; a mill room, equipped with sawing machinery and wood trimmer, run by a gas engine, operated by the students. The smallest equipment consists of one shop, very crowded, with individual benches and tools, one small storage room and one small work room for use in carpentry. To offset the adverse shop conditions at this school projecting boards are fitted to the desks of the lower grades and are in practical use as benches. In spite of the limited equipment there are wise and successful adjustments to the interests, abilities and tastes of the various workers, from the youngest child to the oldest student.

The smallest number of periods given to manual training is 40; the largest number, in a highly specialized course, is 550, which are given to shop work.

*Domestic Science and Art.* — One only of these schools requires a course in this work. That course is of 40 periods, and is devoted to sewing and basketry, with the possibility that students will introduce the work under favorable circumstances. No one of these schools offers any course for the preparation of any special teacher of cooking or of sewing. One school offers a summer course in domestic economy for teachers in the elementary schools.

*School Gardens.* — One of the schools requires a course in the nature-study aspects of the school garden. Of the other schools, two offer and two require professional courses in the elements of agriculture.

At one school the garden measures about 1 acre in extent. The border of 20 feet is laid out as a lawn, containing many hardy shrubs of the choicest sorts, the remainder being divided into over 250 beds, each 4 by 8 feet. Three or four pupils are assigned to each bed. The students have slightly larger beds. The garden is enclosed by a handsome iron fence, contains several hotbeds and cold frames, and has well-placed hydrants. A gardener gives his full time to the care of the garden and property. Some 15,000 bulbs are planted in the fall. In the spring are planted annuals which bloom in the fall. Vegetables are

not grown on account of the difficulty of caring for them in the summer. Children can work during the summer vacation if they wish to. They are given flowers to take home from the gardens of the normal students. Grass gardens are planned for this season. This school garden is for the purpose of nature study, to give children an opportunity to observe plant and animal life at first hand in its natural environment, to increase their appreciation of nature, their love of the beautiful, and to cultivate the æsthetic side of child life.

At another school, in a garden of much smaller area, the plots measure 4 feet by 20, and are used for the class gardens of the eight elementary grades. Four "rotation" gardens are conducted by normal students. Real agricultural problems are attempted, though on a small scale. The indoor laboratory work precedes and supplements the garden work in a fine way. The laboratory is very inexpensively equipped but is well fitted to its purpose. The course is of a year's duration, and includes budding, rooting soft-wood cuttings, care of bulbs, seed germination, grafting, pruning, etc., soils, rotation of crops, milk and its care, weeds of importance, the enemies of plants, ornamentation of house and school grounds. This work is practical and disciplinary. The main purpose seems to be the appreciation of agricultural processes and the comprehension of the laws of growth by growing plants under natural conditions. The course in botany at this school follows gardening, and is to acquaint the student with the general field of botany, with the characteristics of forest trees and the problems of forestry, and with systematic botany and œcology.

At the Dunn County schools, where agriculture is required, the work is simple, concrete and most practical. It puts the students, by personal effort, into self-possession and into an understanding touch with their pupils and the parents. The aim of all the industrial work here is to have the students get power to do practical good, — to organize thinking by organizing hand-doing, to assist workers to larger returns in profits, thereby making possible higher standards of thrift and good taste. The results are exceedingly fine in quality and quantity. No small factor to this success is the intimate connection maintained by the faculties with the teachers and households of the

county. As traveling faculties they hold semiformal institutes, make personal visits to the teaching graduates, inspect farms and houses upon request and plan improvements. At the school every member of the faculty is active as "first-aid" helper or as correspondent, as occasion permits. These schools are the heart of life for those they serve.

This powerful work in Dunn County is in wise and direct accord with the standards and systems by which the Ontario Agricultural College at Guelph, Can., has become the most efficient agricultural college on the continent. These institutions have come to their power by their forward look and freedom from academic traditions, by practice of the arts and sciences, by inductive approach to principles, by sensible correlation of subjects, and by daily application of the same by the faculty at any farm or home for which aid is asked.

The estimation in which the college at Guelph is held is evidenced by the visits of 40,000 farmers from June to December, and of more than 1,200 teachers within two years.

Practice teaching is a definite part of the professional work at each of these schools, though it is not of long duration. The State schools have each a training school, including all the elementary grades. The Dunn County Normal School uses the city and neighboring rural schools.

#### CONCERNING OTHER NORMAL SCHOOLS.

Normal school announcements to students graduating from accredited high schools indicate that of 20 prominent northern States, 6 require courses in elementary manual training, 9 others offer elective elementary courses and 5 offer advanced courses. Eight States offer elective courses in domestic science and art; 6 schools offer training for departmental teaching or directorship. Most of the agricultural States require students in short courses to study elementary agriculture, and offer both elementary and advanced courses in the subject to other students.

#### TECHNICAL INSTITUTIONS PROVIDING SPECIAL NORMAL COURSES.

The professional preparation of directors and departmental teachers of industrial work, whether elementary or advanced, is

accomplished much more successfully by other than State normal schools. Visits were made to the Mechanics Institute, Rochester, N. Y.; Stout Training Schools, Menomonie, Wis.; Hackley Manual Training and High School, Muskegon, Mich.; Bradley Polytechnic Institute, Peoria, Ill.; Lewis Institute, Chicago, Ill.; Macdonald Institute and Ontario Agricultural College, Guelph, Can.

The equipment at each of these schools is remarkably extensive and adequate for securing high technical skill, fine standards of taste and progressive professional preparation in the several industrial departments and in both elementary and secondary courses.

For entrance to normal classes all these institutions require that candidates shall be graduates of four-year high schools or have the equivalent education. The courses are numerous and rich in technical work, and are of two years duration, except the course for manual training at the Macdonald Institute, to which teachers holding permanent certificates are admitted and which is of one year duration. English, related science, psychology, pedagogy and history of education are studied more or less in their relations to the industrial arts. The several arts are studied historically and in relation to present educational and business conditions.

The proportion of the time devoted to hand work averages in manual training courses about 60 per cent.; in domestic art and science courses from 33 to 64 per cent., the general average being 47 per cent. The number of periods given to practice teaching, including observation, varies in manual training courses from 24 to 216, in domestic science and art courses combined from 60 to 180. For observation and for practice teaching the classes of children are apparently numerous at all the institutions, and abundantly so at Menomonie, Muskegon and Guelph. The small amount of practice teaching is generally due to the large amount of the hand work undertaken.

Each of these technical institutions owes its establishment to the clear wisdom and large generosity of private individuals. Freedom from some academic traditions and from the restrictions of a city treasury has enabled the leaders of these institutions to make noteworthy advances in industrial education.

## MANUAL TRAINING BY CORRESPONDENCE.

The conduct of elementary manual training and sewing without the cost of a supervisor is the work of the American Manual Training School at Chicago.

The company furnishes benches and sets of tools, one or many, rough stock of approximate size, and instruction and question papers. The instruction papers picture fully and describe accurately. Free-hand and mechanical drawing are introduced, art is added to craft, and the related nature study is clearly presented. The question paper follows the completion of the object, includes the educational values of the work, the pupil's report as to his satisfaction or difficulties, and the parent's report.

In practice, the regular teacher of the room, or some teacher selected from the corps, makes the objects first, and after correction from the central office or by a local carpenter aids the children in following the directions on the papers.

At an evening settlement school in Chicago, Ill., and at Hastings, Minn., the plan was seen working successfully. Three towns in Massachusetts use the course. In the middle west the plan is being adopted very widely.

## AIMS.

*Normal Schools.* — The aims of manual training courses in northern State normal schools, as learned by observation in 20 schools and by reading some 80 circulars, are almost exclusively cultural and in a certain sense academic. The aims usually expressed are: educational, well-rounded culture, to quicken the intellect, to train the mind by motor activity, to make the hand the servant of the mind, to develop individuality and creative ability, to promote self-reliance, making apparatus for teaching, preparation for teaching in the grades.

Rarely does one hear or read of these aims: cultivation of responsibility, development of the constructive imagination and analytic thought, valuation of the product, steps toward a vocation. Perhaps most of these aims are held subconsciously.

The aims of domestic science and art are unanimously expressed as personal knowledge and skill in homemaking, and



preparation to teach in the grades. Apparently all other aims are subconscious, and remain unconsidered with students and children.

The aims of school gardening are for the most part those of nature study, with the emphasis on the growing of plants, which necessitates foresight and patience. In elementary agriculture the attitude toward nature study is sufficiently prominent. The vocational element has cut off some of the ramblings of nature study of interest chiefly to the teacher.

*Other Professional Schools.* — The technical schools having professional courses cite all the aims recorded of normal schools, but they have a larger outlook on life. Emphasis is laid on accuracy of forethought and skill in systematic handwork, on the best standards and practices, on vocational and social aspects of the crafts and arts.

The professional aim is much more highly differentiated in these schools, and is made the directing agent in both academic and technical work. A strong effort is made in a few schools to adjust the technical work to the inherent needs of children and youth.

#### VOCATIONAL AIMS.

Short additional visits to this end were made to the State College of Agriculture and Mechanic Arts at Ames, Ia.; to high schools at Altoona, Pa., and Oshkosh, Wis.; to the Elementary Manual Training School at Grand Rapids, Mich.; to a Hebrew charity school in Chicago, Ill., and to the Carnegie Technical Schools, Pittsburg, Pa.

*Normal Schools.* — Individualism, not social service, is the prevailing aim. Vocational aims are practically unconsidered in all departments of normal schools. The obligations of modern social relations are rarely mentioned outside of some cultural course in sociology or economics. If any vocational element arises in elementary manual training it is essentially due to the outward resemblance of the work to man's labor.

*Technical Schools.* — What vocational results are secured in these schools come largely from optional or original work, from progressive construction (*e.g.*, from making the patterns to operating the assembled machine) and from repair work.

At the Ontario Agricultural College all male students in manual arts make objects in wood and iron for use on the farm and in the house. They take apart, repair, assemble and test by actual operation all farm machinery and apparatus. The chore work of the early morning and the actual service on alternate afternoons, in all the departments of farm work in rotation, are vital factors in establishing the new thought as muscular habits. This labor is paid for as soon as the term of instruction is passed. The effects of this vocational effort upon intelligence, skill and character were highly commended.

In the Iowa Agricultural College the work in wood and iron follows more conventional lines. Many new farm machines are kept on exhibition, are taken apart and put together again by students, but they are not tested then by actual use.

At Menomonie the students of the Stout Training Schools, with the instruction and aid of the department teachers, have furnished and decorated a near-by house of seven or eight rooms. The strongest impression arising therefrom is that of the superior taste by which all elements have been harmonized. The vocational trend appears on considering that the objects were made to meet house conditions, and that some comprehension of the work of a house furnisher and decorator must have resulted. The excellent bulletins published by this school are very effective in training the professional student to realize that equipping a manual training school or department is highly vocational.

The Carnegie Technical Schools are housed in beautiful buildings, placed in an environment made beautiful by nature and by the art of man. The shops are adequately equipped as laboratories. "The School of Apprentices and Journeymen . . . offers instruction to supplement the usual apprenticeship, strengthen the reasoning faculties, teach both the theory and the practice of the trade . . ." <sup>1</sup> Although apprentices receive two thirds of their instruction in the shops, the work is largely cultural. The trades — *e.g.*, plumbing, electric wiring, etc. — are not practiced under the structural conditions of real houses. Hence "the power of applying abstract theory to practical operations" is not developed in the vocational sense.

At the Bradley Polytechnic Institute the students have built

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<sup>1</sup> From the "Circular and Catalog."

two lathes, have two more on the way, and in all have made 30 per cent. of the equipment in the machine shop. They do all the repair work also.

The maintenance in an institution of all-day, half-day, evening or weekly courses in all the industrial arts, continuing from three months to four years, produces very beneficial results on the professional courses. Students in these courses, by contact with the vocational students and by indirect instruction, acquire broader and more energetic views of life, and their aims trend from the school to the home and work room.

Visits to factories are occasional features at many of the schools. The close study of factories results in a stimulation of the high school boys to strive for the larger responsibilities (most of the boys go to engineering colleges) and of the professional students to be more direct and practical in their instruction.

Only in very rare cases does one find consideration of such aims as meaning of labor, ethics of a skilled workman, honesty and loyalty in work, recognition of industrial work, as applied science and applied art (therefore scientific and artistic).

At both Muskegon and Altoona the girls are equally well provided for, and, as is common to all domestic courses, the vocational elements are prominent.

At the Oshkosh High School the boys completely furnished the room for mechanical drawing. They run the milling machines, unite hand and machine tool work, and differentiate in objects to the farm, home and school.

The elementary manual training work at Grand Rapids is carried on under most adverse conditions, but to the pupils the meager opportunity is like an oasis in a desert. The contrasts with Muskegon and Altoona, cities one fourth as large, are tremendous testimony to the value of democratic high schools.

At Muskegon elementary manual training is taught through all the grades. The eighth grade is united with the high school, thus keeping many boys and girls in school during the years from fourteen to sixteen, and usually longer. Industrial work is compulsory, except during the last two years of the school course, and then is elected by a very large majority of the students. Differentiation is allowed as early as ability warrants, and is free to all during the last two years. Thus there has

come to be a natural trend on the part of some toward the local high-grade skilled industries. Trade courses are not conducted, but vocational tendencies are as possible of satisfaction for the trade worker as for the prospective engineer or physician. Several manufactories of motor boats and electrical apparatus have a constant agreement with the principal to employ in advanced positions and at higher pay, any boy he will recommend.

At Altoona similar conditions prevail in the grades, but the eighth grade is not a part of the high school. Apprentices are not taken at the railroad shops until they are sixteen years of age. From fourteen to sixteen the boys were busy in trivial work or running wild. To give these a fair chance in life, and at the same time to increase efficiency in the shops, the Pennsylvania Railroad Company installed in the high school a very complete and modern equipment for working in wood and iron. Many of the machines are run by individual electric motors, thus bringing boys into contact with some new shop conditions. Boys graduating from the industrial course, which is not a strict trade course, will save from one to two years actual time, according to ability, on entering the shops, and rise far higher in a few years than would have been possible otherwise. College graduates are obliged to enter as apprentices, in part to acquire the hand skill and shop sense omitted in their cultural courses. From one to two years are thus lost.

The Consolidated Rural School at Guelph is adjacent to the Macdonald Institute and the college. Enough children are gathered to establish eight grades, in five or six rooms. Two other rooms are fitted for elementary manual training and cooking. The interests and abilities of the children, the farm and home needs, and reasonable relationship to other subjects are the bases in organizing the work. The school garden includes individual plots, varying from 6 to 120 square feet for each pupil, class plots, school plots and experiment plots. The usual nature-study gardening is followed by agricultural work and experimentation. All the later work reflects the spirit and purpose of the college. Sound sense, good judgment and efficiency, interest in knowledge and good taste, skill in work, ability to help and an understanding of life as it is are definite results.

“Dr. Robertson’s Work for Canadian Farmers” and Sir

William Macdonald's improvement of rural education are described in the "Review of Reviews" for November, 1907.

#### CRAFT AND ART.

The union of craft and art is attaining considerable prominence in preventing the selection of bad designs. In a large majority of all educational institutions of all grades there is little correlation of craft and art worth the name. Drawing is theoretically and deductively presented, and continues to exist for the cultivation of tastes which cannot be satisfied except with loss of thrift or honesty. Even mechanical drawing in manual training courses is usually isolated from the structural work. Free-hand perspective has received little if any attention as a shop language. The union of craft and art is most prominent in the selection of good designs by instructors and in the training of students to good taste by making objects possessing structural beauty.

#### TRADE SCHOOLS.

Visits were made to the Werwath School of Engineering, Milwaukee, Wis.; Coyne Brothers Trade School, Chicago, Ill.; New York Trade Schools; Y. M. C. A., Grand Rapids, Mich.; Horological School, Peoria, Ill.; United Jewish Charity School, Cincinnati, O.

The trade schools and agricultural schools excel all others in the degree to which they exemplify education as a living process. Experience, tested skill, vocational honesty and loyalty, the inductive use of science and mathematics on the work in hand are their characteristic aims. These schools obviate the necessity of "stealing a trade."

The Werwath School of Engineering is a small but effective private school, conducted by German engineers. Just as geometry and algebra originated and expanded under the necessities of structural work, and in those days were so taught, so here arithmetic, geometry and trigonometry are introduced when needed or helpful in shop work, and are expanded as that work advances, *e.g.*, trigonometry appears as soon as the worker has occasion to know the relations in a right-angled triangle, at least three years preceding the "cultural" position of the subject. A youth who had previously attended the city manual

training high school testified that there he had disliked mathematics, that here he had no difficulty because they were joined to the shop work. It was surprising and enlightening to find that English spelling and correspondence, scientific German, scientific French, business law, United States and general history were required subjects.

Coyne Brothers Trade Schools teach plumbing, plastering and brick laying to any one "from fifteen to sixty," by day or night. The work is all done full size and according to regular structural conditions. Actual work on houses being erected in or near the city follows the school instruction, and is required before a certificate is granted. The instruction is individual and without books if one wishes. Drawing is required as the "shop language." The school reaches boys, laborers, ambitious workmen and immigrants, and in that city of many languages advances each by handwork and drawing to greater social unity. Lectures are given and discussions held on all technical matters. There is no time limit for finishing a course. The location of the school building is most appropriate.

The New York Trade School offers courses in fourteen of the building trades and in printing. The equipment is not of the laboratory order, but is inexpensively and adequately vocational. The training gives a young man a knowledge of how to use his tools, how to do work, the theory of the trade; and, more, experience, facility and speed of execution. Scientific instruction is given by means of carefully prepared lectures, manuals, diagrams and experiments. Examinations are held in both day and evening classes. High standards must be attained in workmanship, theory, attendance and general proficiency in order to graduate. Committees made up of representative master mechanics co-operate in the supervision of the classes. The annual attendance averages over 800 students. The power of the school is due to the excellence and completeness of instruction in both handicraft and theory; to opportunities for extensive actual work; to the high standards required; and to the constant personal successes of students in paid service.

The Horological Department of Bradley Polytechnic Institute is a school for the education of professional watchmakers or "jewelers." The trades included are watchwork, engraving,

jewelry and optics. The standards of technical knowledge and skill in production are of the highest. Like the New York Trade School this school meets and solves most successfully the industrial problems of apprenticeship. The vocational requirement is complete; no student is given credit "for knowing how to make a piece until he has actually made it unaided. To this end students work eight hours a day at the bench, with a teacher constantly at hand to explain difficulties."

The trade sewing school maintained by the United Hebrew Charities of Cincinnati teaches girls of fourteen years and upward hand work, machine work, dressmaking, embroidery, etc. Articles are made for personal use, to sell and to order. Shop hours constitute a day's work. The money received from sales is divided among the sewers according to their respective services. All charges are at full commercial rates, and the injurious results of underselling are pointed out. Compensation received keeps the girls in the school. Making articles to sell is used as a concrete means of teaching cost and sale values and business practices. The relations of skill and regular habits of labor to wages and profits are duly emphasized. Practice is given in ascertaining what can be bought for a given sum of money, whereby real worth of material is taught and thrift encouraged. Taste is cultivated by discussion of the materials handled, their fitness to purpose, both in structure and ornament. The moral dangers of the rich and poor, of the shop and stores are considered, and all elements of womanly character are impressed. Many remarkable successes in business and transformations of character were cited.

Considerable light was thrown on the relations of labor unions to short trade courses by a visit to the Y. M. C. A. at Grand Rapids, where a winter evening course in plumbing was finally established.

Trade schools have vitality, energy and enthusiasm of a kind and to a degree which are unequalled. They are positive, immediate and effective in producing skill, elevating personal and social standards, strengthening character, and opening the mind to a consideration of the problems of present industrial conditions. The secret of power of the trade school is the satisfaction of youthful ambitions to participate in adult endeavor and

responsibility. Youth is the natural period of and therefore the necessary time for the cultivation of skill, whether for its own sake or as a means to new power and opportunity. Vocational training makes work play for the hand and joy to the mind.

#### MANUFACTURERS.

Interviews were held with the owners or managers of factories using unskilled laborers, low-grade and high-grade skilled workmen. The factories were inspected and the qualifications and training of the different grades of workmen were explained. The following comments are of special interest:—

##### *Door and Sash Factory, Oshkosh, Wis.*

Employees are mostly of foreign birth or descent. Boys hired are usually of the first generation in America and have attended parochial schools.

Boys begin work at fourteen or fifteen years for \$4 a week, "taking away" stock, and after ten years of service, on the average, receive the maximum pay of \$12 to \$15 per week.

Laborers and low-grade skilled workmen become "floaters" early, are indifferent, and "scamp" work when labor is in demand. Some become dissatisfied, and change to farming or railroading.

Labor supply is largely supplied by immigration.

Trade schools for boys of fourteen years and upward would save the boys and raise the standard of efficiency in the shops.

Boys who have had manual training in the high school are not available, except occasionally during summer vacations.

Bookkeepers or clerks in the office should have worked through the shops.

Arithmetic should be made to include business forms, *e.g.*, a boy should be able to understand that a list of regular sizes has some relation to arithmetical work.

Geometry of form, mechanical drawing of plan and elevation, free-hand perspective should be taught in the grades.

Mensuration, especially as related to plane geometry, should be taught early and practically. The high school work should be even more practical.

Two saloons close by are the most destructive of all the enemies to labor. The second generation "guzzles."

##### *Business Systems Factory, Muskegon, Mich.*

Comments were numerous and repeated most of those just cited.

Very little high-grade skilled labor is required, the cabinets being made according to stock patterns.



Securing and keeping labor are most unstable conditions.

Making a foreman is more than training him to run a series of machines. The ability to manage men is inborn and grows with opportunity. Not one in a hundred has this ability.

Under the present conditions of industry economy of material or time or effort is no concern and of little knowledge to the workman.

*Furniture Factory, Grand Rapids, Mich.*

The comments on the industrial situation, the suggestions as to education, the history of the changes in labor and the assimilation of foreign trained workmen in this factory, the defects of management in the modern system, the future of the workman, the failure of "culture," the basis of happiness in social service, and other topics discussed are worthy of a full record and special consideration. Only those comments most closely related to the subject are mentioned.

Of the 500 employees the best men began thirty to forty years ago, at fourteen years of age, were trained in old-time ways and have remained with this firm from the beginning. They have skill, loyalty, integrity, ambition, social regard in the highest degrees. Some of the sons are growing up beside their fathers.

Present day division of labor and the remoteness of the employers (owners) are prominent causes of the deterioration of labor and the indifference of capital, of the degradation of the poor and the greed of the rich.

First and last and always, the ambition of the workers must be preserved and fostered. Second and always, mutual faith and respect must prevail between employer and employee.

Equality before the law of opportunity to a successful vocation is a fundamental right.

Every individual should be trained definitely in some vocation.

School systems as now organized are removed from the work of daily life. The secondary schools favor the relatively rich, who have ability with books.

Children of the poor, from fourteen to sixteen years, irrespective of natural ability, are denied a chance to learn a vocation. Trade schools are their right.

Children and youth who must learn chiefly by manual work are denied their right to a successful livelihood. Industrial training must be provided equally with all other kinds.

The graduate of a grammar school often thinks he knows too much to go into manual work. The graduate of a high school as often esteems himself too good for it.

Elementary manual training does not trend toward vocational life. So long as manual training is limited to grammar grades, and treated as an adjunct, high school students will continue to regard it as something they have outgrown.

When industrial training (elementary, trade, secondary, etc.) is ample and open to all, all will take some form of it. Then efficiency will be a direct product of the schools.

Opportunities for trade instruction should be given at thirteen years of age, and should be in the directions of the fundamental and leading occupations of the place.

Trade schools are an absolute necessity to the children of immigrants. They cannot be made productive of good in any other way.

Skilled labor in this factory comes, for the most part, 75 per cent. from Holland, Scandinavia, Poland and Germany; 20 per cent. represent twelve other nations; only 5 per cent. are native. The employer never advertises, never goes out for workers. They all apply at the door. This condition will continue as long as immigration from north-western Europe continues. These workers attended trade schools in Europe. Trade schools only will save their children. "Take the brain while it is receptive and keep it so."

Justice must prevail in all the relations of life, for none are left out of the business of the production of men.

*National Cash Register Factories, Toronto and Dayton.*

A close inspection of the factory at Toronto was made under the personal guidance of the manager. His comments suggest new educational practices.

No manufacturer can afford to increase his product or profit at the expense of his employees.

Every man's ambition to better himself should be fostered. Every person here can learn new lines of work, under the instruction of the company.

Skill must be acquired in the "teens" and early adult life if at all. There is much loss of skill and judgment in construction by delaying shop (vocational) practice until theoretical (cultural) courses are passed. Adaptiveness and invention make early growth naturally.

The power to meet emergencies grows by early practice, when tools are few. The mechanic who is trained on a full kit of tools and selected material depends on them to meet an emergency and fails without them. The less tools the more man is needed.

The highest mechanical skill is required in assembling and adjusting the registers. Every course in handiwork should continue and cultivate the childhood attempts to take apart and put together.

Every man's ability should be stimulated. Suggestions and complaints are requested. For each one adopted \$1 is paid, and substantial quarterly prizes from \$5 to \$50 are awarded.

Every employee's health, comfort and education should be the concern and duty of the manufacturer. Labor and capital should work together for the benefit of both.

Factories should be an essential feature in the education of all persons; in particular, for those who may work in them; in general, that social service may become a duty.

A general inspection was made of the large factories at Dayton, with the special aim of studying the "welfare" work, including gardening by boys. Much can be said in praise of the principle and practice of "welfare" work. It puts and keeps the whole man at work, both employer and employee, and each for the good of both. A series of talks to this end would accomplish much in setting standards of social service. Illustrations can be had for the asking.

The boys' gardens are conducted on a general business basis. The gardens worked in common have been given up. Individual plots are assigned. Applications far exceed the number available. Instruction is given by the gardener in charge. Lectures on gardening and related subjects are given at intervals.

System is taught and required in the gardens. Freedom is granted the boy in the management of his garden, but he is held responsible for results. A complete record of his work is kept. Work hours are from 6.30 to 7.30 A.M. and from 4 to 5.30 P.M. Captains are selected each year to govern squads.

All products are given to the boys to take home or to the market. Prizes averaging \$50 a season are awarded for the best gardens. Each gardener is graded on five counts, — value of product, condition of garden and tools, regularity, deportment and condition of account book. A harvest banquet is given annually to the boy gardeners, when prizes are awarded.

Promotion to positions in the factory are frequent. Moral breadth, bodily health and the lesson of industry are character results.

#### THE PROBLEMS OF TO-DAY.

Public education was established to prevent social evil and to promote social good. "Profitable to the Commonwealth," already a vital principle, became a directing principle of education in Massachusetts by a legislative act in 1642. Evolutionary changes in social structure and function have always caused important changes in educational aims and practices. The

social conditions necessitating general industrial education, if clearly discerned, will make evident the forms and extent which industrial education should take.

*Social Organization.* — Speaking industrially, the social organization of to-day consists of three parties, — labor, capital and the public. In their organized relations these appear as labor unions, combinations of capital and the civil bodies corporate.

Division of labor has separated workers into the mechanical — those who are active personally in the transformation or transportation of materials — and the managerial — those who are active personally in organizing the efforts of mechanical workers, and whose own amount of mechanical work is variable.

At one extreme, division of labor reduces the mechanical worker to automatism, preventing breadth of understanding, extension of skill and a thoughtful outlook. Capacity for personal growth or social service are well-nigh destroyed. Lack of opportunity more than natural selection determines the degradation of the mechanical worker. At the other extreme, division of labor induces in managerial workers the highest power of origination, intense interest, marvellous skill and prophetic outlook. Individual power is offered unlimited growth through social service. Natural ability more than opportunity determines the position to which managerial workers can rise.

Economy is the great object in the conduct of industrial work. Economy of original materials and by-products, of labor in production and transportation, of effort and time has been the great factor in industrial success. The new form of economy must come by improving the intelligence, skill and virtues of the workers, both mechanical and managerial.

Mutualism has become the dominant characteristic of social life. Through division of labor, the interdependence of beings for the satisfaction of every necessity or desire in life has made individualism impossible. Struggle for others is the vital condition of self improvement.

The test of efficiency, success and character of the individual is the degree to which he promotes the common welfare.

The social conscience is demanding from every mechanical

worker an honest day's effort and from every manager the faithful performance of his trusteeship. Responsibility and equality before the bar of public opinion are the new standards of measure in human affairs.

The sharp struggle between organized labor and organized capital, at the expense of both and of the public, will terminate in organized co-operation, in which employer and employee will work as partners and share the profits equitably. The value of wealth will be measured by its power to promote the welfare of the social body.

Education is the sole means of maintaining an out-grown social organization or of promoting a growing social body. The fundamental aim of organized education should be usefulness to the social body, whether in the production of articles, advancement of learning, cultivation of the beautiful, or ministration of the spirit. The processes of education should bring every learner into practical contact with the best of every phase of social effort.

Equality of opportunity before the law for vocational (including professional) training and social welfare is the right of every individual. Public provision to these ends is now greatest for persons of property and of ability to use books, and is least or nothing for the poor and for those who must learn by doing, if at all.

*The Future of the Children.* — Of the total number of children entering elementary grades —

Forty per cent.<sup>1</sup> leave the grammar school before graduating; 12 per cent. graduate, but do not go to the high school; 52 per cent. go from the grammar schools directly into work.

Thirty per cent. go to the high school, but drop out within two years and go to work; 9 per cent. go to the high school, graduate, and go directly to work; 39 per cent. go from high schools directly to labor or business.

Three per cent. go to high schools, then to technical institutions, and in due time into business.

Three per cent. go to high schools, then to colleges; 1 per

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<sup>1</sup> These percentages are derived for the most part from the report of the Commission on Industrial and Technical Education, April, 1906.

cent. of these pursue various callings; 2 per cent. enter the professions.

Three per cent. go to high schools, then to normal schools, and then enter the profession.

*Summary.* — Of children entering elementary grades 52 per cent. go from grammar schools to work; 82 per cent. go before third year of high school to work; 91 per cent. go from grammar and high schools to work; 94 per cent. go from all institutions to work; 5 per cent. go from colleges and normal schools into the professions; 1 per cent. from colleges do not enter the professions.

*The Classes to be reached.* — In the approximate order of their danger to American life they are: —

1. The children of immigrants from the lands of illiteracy, primitive industries, unskilled labor and autocratic rule; 78 per cent. of the immigrants since 1902 are of this class.

2. The children of the immigrants of western and northern Europe, most of whom are skilled workmen; only 22 per cent. of the immigrants since 1902 are of this class.

Sixty-five per cent. of the population of cities over 100,000 are of foreign parentage. In some smaller cities the proportion is 86 per cent.

The tendency toward crime among the children of foreign parentage is nearly two and a half times as much as among the children of native parentage.

3. The children of native parents of small means who must go to work at fourteen years of age.

4. All children and youth who must learn by muscular experience.

5. All children and youth who learn easily by experience and by symbols.

6. Employed persons to whom should be offered full evening opportunities, adapted to local conditions.

#### THE PROBLEMS OF INDUSTRIAL EDUCATION.

*The Aims.* — Promotion of social welfare is the all inclusive aim. The improvement of the individual is to be secured by directing his efforts in co-operation for the good of all. The distinct aims are: —

1. To provide opportunities for the natural selection of a vocation, through varied experience and information.

2. To produce workers, mechanical and managerial, with skill, intelligence, taste, efficiency, co-operative ability, and of high personal and social ideals.

3. To produce objects and organizations, useful and beautiful, satisfying the producer and promotive of the public good.

4. To increase thrift and the consequent opportunities for leisure, in which there may be freer expansion of self and fuller enjoyment of social intercourse.

5. To increase opportunities for the thoughtful consideration of social rights, duties, responsibilities and efforts, both as related to environment and to responsibility.

*The Opportunities.* — The principle, "Equal opportunities for all," requires: —

1. The establishment of technical, agricultural, commercial and domestic courses, according to the local industries.

2. The continuation of industrial training from the simplest elements in the kindergarten to the most differentiated elements in the highest schools.

3. That opportunities for experience be sufficiently varied to facilitate selection of a vocation, production of skill and widening of view.

4. That opportunities be proportionately ample for the study of drawing, English, mathematics, related science, history and economics; in general, the subjects related to the vocation.

5. That the content and length of courses should be adapted to the abilities, ambitions and necessities of the workers.

There should be an early differentiation into the trades by the needy, who must help to earn a livelihood shortly after fourteen years of age.

An early but longer course into the trades or skilled industries should be provided for those who must learn by doing, and can remain for that purpose.

More highly specialized courses should be provided for those whose abilities and ambitions warrant preparation for expert technical work or for managerial duties.

6. Every possible opportunity should be provided for employed workers, both in technical and academic lines.

In general, industrial training should prevail to such an extent that, whenever an individual finds it necessary to enter employment, he shall have acquired sufficient skill, strength of ambition and reliability of character to ensure efficient work and probable advancement to positions of higher service and responsibility.

#### THE FUNCTION OF NORMAL SCHOOLS.

Life is development. The work of life is production, objective and subjective. Education is promotion of the development, which is both natural and possible at the time. The process of education is production. The test of education is personal efficiency in promoting social welfare.

To show the purposes, processes and results of industrial education possible in the public schools as they are now organized, normal schools should maintain in their training schools courses in technical, agricultural, domestic and commercial handicraft.

Handicraft and information (1) should be adapted to the abilities, interests and necessities of pupils at each phase of life; (2) should be correlated practically, so that experience shall necessitate information and be reacted upon by it. Craft and art should not be separated.

The order in handicraft should be practical, but not controlled exclusively by an arbitrary analysis of tools and their uses, or of the technical difficulties of construction. Ingenuity should be tested and directed definitely. The natural instinct for taking apart and putting together should be trained toward invention. Repair work is superior to new construction in training ability to meet emergencies. Economy should be taught by utilization of old stock and by finding uses for the "waste" from new stock.

All courses should include construction by division of labor, and sufficient repetition to produce by experience personal judgment of the attendant gains and losses to a workman. Co-operative work for the good of the school or community should be undertaken in this connection.

Extension of industrial work into the homes, and, in some cases, to vacation employment should be an essential part of



school effort. Visitations to mills, farms, shops, stores, banks and related places of industry should be regular elements of the courses.

Understanding, accuracy and facility with number, form, drawing and the English language should be based on experience in constructive work. The other subjects should be definitely arranged to extend experience into information, to enlarge the world, to widen interests and to judge material and social forces.

Throughout each course there should be due discussion of the bearing of the work on individual skill and character, and on the social good resulting. In the higher grades the problems of labor, capital and public service should be considered with a fullness appropriate to the maturity of the pupils.

For students preparing to teach in elementary grades there should be required practical courses in technical, agricultural, domestic and commercial work. Professional instruction should emphasize: —

1. The observation of pupils at work and at play; practice teaching.

2. The study of natural interest in handwork, of the necessity of learning by experience, and of the relation of experience to information.

3. The formation of courses in industrial work, — aim, practical work (required, optional, original); basis of selection and arrangement; materials and their peculiar values; knowledge gained directly (practical and social); information; value to the individual and to society.

4. The kind and amount of actual vocational work, the visitation of mills, farms, shops, etc.

5. The union of craft and art; shop mathematics; drawing as the "shop language," value of constructive thought to use of English; other correlations.

For the preparation in Massachusetts of special teachers and supervisors in the general industrial arts, it is desirable that the policy of the Board of Education be extended, and that single departments be established for the promotion of technical work, nature study and agriculture, and commercial work, at different normal schools.

There should be in every normal school a practical, definite, continuous study, by every student, of society as it is now organized, of its present struggles and of its future development. Industrial education is necessitated by severe social stresses, and the forms and extent which it should take to right wrongs and increase personal and public welfare to-day and every day should be determined by persistent attempts to solve the present social problems.

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APPENDIX F.

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REPORTS ON SPECIAL SCHOOLS.

COMPILED BY JOHN T. PRINCE, AGENT OF THE BOARD.

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## SPECIAL SCHOOLS.

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The Board of Education is required by law — chapter 39 of the Revised Laws — to supervise the education of pupils who are placed in certain institutions supported wholly or partly by the State. These institutions are as follows:—

1. The American School at Hartford, Conn., for the Deaf, JOB WILLIAMS, L.H.D., Principal.
2. The Clarke School for the Deaf, Northampton, Miss CAROLINE A. YALE, Principal.
3. Horace Mann School for the Deaf, Boston, Miss SARAH FULLER, Principal.
4. Sarah Fuller Home for Little Deaf Children, Medford, Miss ELIZA L. CLARK, Matron and Principal.
5. New England Industrial School for Deaf Mutes, Beverly, Miss MARTHA O. BOCKÉE, Superintendent.
6. The Boston School for the Deaf, Randolph, THOMAS MAGENNIS, Superintendent.
7. Perkins Institution and Massachusetts School for the Blind, Boston, EDWARD S. ALLEN, Director.

### THE AMERICAN SCHOOL FOR THE DEAF.

JOB WILLIAMS, PRINCIPAL.

The whole number of pupils attending for the year ending in June, 1907, was 169, of whom 55 — 37 boys and 18 girls — were from Massachusetts. A class of 12 — 6 boys and 6 girls — was graduated at the end of the year. All the girls had been thoroughly trained in cooking and in dressmaking and the boys in cabinetmaking. The boys have all secured good positions, — 2 in cabinetmaking, 2 as carpenters, 1 in a typewriter factory and 1 in a clock factory. The girls, also, so far as heard from, are usefully and profitably employed.

In methods of instruction we thoroughly test all new theories and adopt whatever prove to be an improvement on what we already have. No one method suits all cases equally well, and the instruction is adapted to each pupil so far as conditions will permit. All young pupils on entering the school are put into oral classes, and are there trained until it is evident that they will be better fitted for life if other methods are used with them. That most of the pupils trained in this school in the years that are past have been fitted to take up life's duties, and take their places in the communities where they live as producers and not consumers, respected by their neighbors, and many of them bringing up families of hearing children, some of whom have filled important public positions, may be witnessed all over New England.

In nine of our classes all the work of the schoolroom is conducted through speech, lip-reading and writing. In the remaining eight classes manual spelling and writing are the chief means used for instruction and recitation.

All the pupils in the main building and a few from the primary building receive instruction in industrial work. During the year 32 boys received instruction in cabinetmaking and 44 in sloyd; 17 girls were instructed in cookery, 33 in sewing, 19 in dressmaking and 6 in ironing. The excellent industrial exhibition at the end of the year showed the value of this instruction.

Few who have not tried it realize the difficulties that lie in the path of the teacher of the deaf. The hearing child at the age of four or five years enters school with a knowledge of words, phrases, idioms and sentence forms which a congenitally deaf child can acquire only after long years of hard drill. At the start he has no vocabulary. He does not know the names of the objects that he sees every day. There is no means of communication between teacher and pupil except pantomime, in which the deaf child has a natural facility and comprehension. The teacher's task may be compared to that of a carpenter wishing to build a house, who had first to cut down trees, saw them into lumber, draw his plans, and make his own tools before he could begin to build. The patience, the perseverance, the ingenuity, the energy and tact required are without limit, — a

difficult task with bright pupils, a very discouraging one with dull ones. The successful teacher of the latter deserves the highest praise.

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## THE CLARKE SCHOOL FOR THE DEAF, NORTHAMPTON.

### REPORT FOR THE CORPORATION.

*To the State Board of Education.*

GENTLEMEN: — The number of pupils in the Clarke School for the Deaf during the past year has been 152. Of these, 109 were supported by the State of Massachusetts, 12 by Vermont, and 5 by New Hampshire. There were also 26 private or paying pupils. The health of the school has been excellent. No occasion for the presence of a nurse has occurred during the entire year.

Six pupils and also 10 normal pupils were graduated in June. The exercises were of unusual interest, and the address by Professor Schmucker, of the Normal School in Westchester, Pennsylvania, was particularly helpful and stimulating to those engaged in educational work. His subject was "The Newer Citizenship."

Some years since I called attention to the desirableness that every deaf child in the State should be required by legislative enactment to receive training in some one of the schools for the deaf designated by the State. I mentioned various countries in which this requirement exists and is with more or less rigidity enforced. I refer to the subject again because it is not probable that the truant officers in this State, which has been so long the leader in educational matters, are uniformly enforcing the law which now exists. Furthermore, it may be questioned if the present law is as specific and authoritative as it should be.

The earlier law of the State exempted from school attendance any child "whose physical or mental condition is such as to render such attendance inexpedient or impracticable." The act of 1906 was apparently intended to correct the large and undesirable liberty of construction which this exemption gave both to parents and guardians and truant officers. The act of 1906, after reciting section 1 of chapter 320 of the Acts of 1905, which makes provision for imposing a fine of "not more

than \$20 " on any person who fails to cause a child under his control to attend school " whose physical or mental condition is not such as to render his attendance at school impracticable," adds the following amendment: "*provided, however,* that no physical or mental condition which is capable of correction or which renders a child a fit subject for special instruction at public charge, other than the public day schools, shall avail as a defence under the provision of this section, unless it shall be made to appear that the defendant has employed all reasonable measures for the correction of the condition or the suitable instruction of the child." It is probable that this amendment, however plain to the legal mind its phraseology and however clear its intention, would generally be regarded as less definite and binding than, for instance, the recent enactment of the State of North Carolina, which provides that "the parents, guardians or custodians of every deaf child of sound mind shall send such child, or cause such child to be sent, to some school of instruction for the deaf for at least five terms or sessions of nine months each between the ages of eight and fifteen years." In this statute there is the limitation of "sound mind," but the appropriate officers have, with the exception of that limitation, no option in the enforcement of the statute.

It seems only a natural sequence of the generous provision made for deaf children by the State of Massachusetts, in this Clarke School and elsewhere, that all parents and guardians of deaf children should be required to avail themselves of the privileges offered to their children. In a country like Prussia, where the provision made by the government is not wholly adequate for all such children, there may be some excuse for the lax enforcement of the law, but in generous Massachusetts, where the expense falling on the parents is practically nothing, it is certainly undesirable that the truant officer should ever be able to hold "that all reasonable measures for the instruction of the child " have been employed unless the child has actually been for a period of at least five years, and more properly for such period as the authorities of the school shall deem desirable and helpful for the pupil, in attendance at one of the schools endorsed by the State. It may be that a statute explicitly framed to secure the attendance of every deaf child in the State



would not be uniformly enforced by the truant officers. Sentimental reasons of sympathy for the family, or pity for the possible suffering of the child going from the home where love has been tenderly watchful, might defeat, in certain communities, the intent of the plainest enactment. It may be that the appointment of an officer of the State to secure the attendance at some State institution of children not normally endowed is desirable. But as there is reason to believe that under the vagueness of the present laws, and in consequence of the good nature and neighborly feeling of some truant officers, now and then a deaf child in this State is losing the priceless advantage which the schools offer, it has seemed to me wise to call the attention of the Board of Education anew to this subject, and to ask for it their careful attention.

At the meeting of the corporators held in March last the grave question as to the wisdom of the continuance of the normal class was laid before the Board. The pressure on our space for the regular pupils of this school is so uniform, and the difficulties of arranging for observation and practice of students in this limited schoolroom space are so great, that it seems probable that we must relinquish this field of work to some other institution. The American Society for the Promotion of the Teaching of Speech to the Deaf is most desirous that this school should continue to carry on the work, and receive the payment which has been so generously appropriated for this instruction. It is, as was said last year, an honor to Massachusetts that the offer was made to this school, and a far greater honor that the class has been large and the training successful, as the graduation last June of ten normal pupils amply attests. But unless there can be an enlargement of the school's facilities, and the school can have a commodious building, the corporation sees no other issue than the abandonment of this work.

It remains a cause of surprise to one who carefully reflects on the subject that this school, devoted to the interests of deaf children, and practically the pioneer in oral training for such children in the United States, patronized by the Legislature of the enlightened State of Massachusetts, remains year after year in substantially the same embarrassed condition. Thanks to the Board of Education and to the State Legislature, we are now

usually enabled to meet our annual expenses, though there is a deficit at the close of this year in our receipts of something over \$400. But while on every side the schools and colleges of this State are gaining new and large facilities; while the most generous benefactions are multiplying their buildings, their scientific and literary equipments and the number of teachers; while advances in comfort are securing a more perfect conformity to the rules of hygienic living, the resources of this school are barely sufficient to keep the conditions of life and instruction at the same level year after year. Larger breathing space for the different classes, a suitable assembly room for lectures and entertainments, and a commodious playroom under cover are most desirable for the children gathered here. That this school should be forced to relinquish the honor of developing by normal training teachers for other schools may seem to some of minor importance; but it is not to the credit of this wealthy State that the abandonment of such a ground for congratulation as the normal department here affords should be not merely possible, but inevitable, unless our equipment is speedily enlarged. It certainly appears strange that a school so eminently promotive of the noblest issues for individuals, homes and the Commonwealth as a whole should be left unblest by the flood of beneficence which fertilizes the other educational interests of our time. Surely if deaf children are, by reason of their infirmity, less prominently before the community, they are not for that reason less deserving of help. The reward for uplifting and strengthening the least of "the little ones" is not less sure or less ample. One can believe that a deeper satisfaction might be gained by those whose beneficence should embrace, elevate and ennoble an entire class of unfortunate children than by those who simply promote the development of normal endowments.

While the chief claim of the Clarke School to the grateful appreciation of the citizens of Massachusetts must rest on the service already rendered during the last forty years to nearly every community in the State, the corporation regards the distinction of being selected by the American Society for the Promotion of the Teaching of Speech to the Deaf as an honor most desirable to retain, and believes that every true son of Massachu-

setts would lament the loss of this unique relation to the training of oral teachers for the deaf.

I cannot close this report without voicing the regret of the corporators of the school at the withdrawal from our teaching force of Miss Katharine Fletcher, who for years has taught the advanced classes. She has brought to her work not merely a high order of talent, but a self-denying patience and devotion to the progress of her pupils rare in any teacher, and supremely helpful in the training of the deaf. She will be followed by the grateful remembrance of hundreds of pupils whom she has led into the fuller enjoyment of domestic and social relations. It is interesting to record that her place will be taken by Mr. Carleton Ames Wheeler, a graduate of Harvard, who became known to us through the connection of two of his brothers with the school. After graduating from this school these two young men pursued their studies successfully at Harvard University.

The occasional attainment of a university degree by graduates of this school (the master's degree was secured this summer from the Institute of Technology by George Buckingham of the class of 1895) abundantly justifies the corporators and teachers in believing that ample provision will yet be made for the most complete advantages of our pupils, and that no service which can be rendered to the cause of oral teaching by this school will be allowed by the enlightened people of this State to be omitted for want of generous support.

All of which is respectfully submitted.

FRANKLIN CARTER.

It should be borne in mind that the amendment to the school attendance laws referred to in the above report applies to blind and feeble-minded children as well as to deaf children. If for any reason the intent of the law as at present worded is evaded by parents and school officials, as it doubtless is, it should be again amended so as to give as adequate protection as possible to these unfortunate classes.

## HORACE MANN SCHOOL FOR THE DEAF, BOSTON.

MISS SARAH FULLER, PRINCIPAL.

## REPORT OF MR. WALTER S. PARKER, ASSISTANT SUPERINTENDENT OF SCHOOLS, BOSTON.

*To the State Board of Education.*

The Horace Mann School reopened on the 12th of September, 1906, with an enrollment of 144 pupils. During the year 21 were admitted and 21 were dismissed. Of the latter number, 9 left to go to work, 5 on account of ill health, 4 to enter other schools and 3 removed to other States. At the close of the year, in June, 1907, 7 pupils were graduated, — 4 boys and 3 girls. Two of these, a boy and a girl, have entered private schools with hearing pupils; 2 others are having training in art work; 1 girl is receiving instruction at a trade school and another is earning fair wages in a manufactory; the remaining boy has not yet taken a position.

The graduates of 1906 have reported gratifying results of their work. They are receiving wages that are quite equal to those of their hearing associates who hold similar positions, and are finding pleasure in their duties.

The desire of parents to add to the family income and the attractions of business life tend to lure pupils from needed instruction as soon as the school age limit is reached. A few of these attend evening schools and others seek private instruction, but for a large majority "leaving school" means a discontinuance of all study. These conditions emphasize the need of securing the attendance of deaf children at as early an age as hearing children enter school, and of helping them to find pleasure in books. In a report just made by the head master of a London school for the deaf, upon his visit of inquiry to American schools for the deaf, occur these words: —

It seemed to me that the introduction of school books at an early period had two good results: first, it met, and to some extent overcame, the difficulty of book language earlier than with us; secondly, it had a most wholesome effect on the deaf child, by placing the standard of "normality" in his own hands, and making him comprehend exactly where he stood in comparison with his hearing brothers and

sisters. This use of books, too, gave a more general range to the knowledge of the pupils, and while this might not be so exact as is usual with British children, it gave a broader outlook on life, and tended to greater self-reliance, whilst the individual effort needed to find information in a book helped in the formation of character.

Throughout the past year the progress of the pupils was satisfactory in all of the departments of study. A visit from members of the New York City Board of Superintendents of Schools, and a report of approval of day schools for deaf children, were gratifying and encouraging to all who have shared in work for the Horace Mann School. The opening of a public day school for deaf children in New York, the most influential city in America, marks an era in education, and is a recognition of the duties and responsibilities of parents as well as of the rights of children in their homes.

The Educational Association, incorporated in 1895 as an aid to this school, has brought many friends and coworkers to it. Classes for conversation, for special work in drawing, for visits to the Art Museum, and to other places of interest and amusement, were formed and most happily carried on in out-of-school hours through many weeks. This introduction to ladies and gentlemen who represent much that is best in life, and the kindness and courtesy with which each pupil was received by them, were strong incentives to the boys and girls to use and to understand speech.

The delay in providing more ample space, both in doors and out, for the school is unfortunate, for while cramped quarters do not prevent good work on the part of pupils and teachers, they do not allow opportunity for study and proper physical training under the best conditions. Assurances that the needs of the school in these particulars are under consideration by persons in charge of school accommodations encourage the hope that another year will bring relief from present discomforts, and increase the means for making the school and its influence of greater service to its pupils.

SARAH FULLER HOME FOR LITTLE DEAF CHILDREN,  
MEDFORD.

FROM THE NINETEENTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE, JUNE, 1907.

In making this, the nineteenth annual report, the management records a year of exceptional well-being in its home. There have been during the year 16 children under its care, the ages ranging from two to five years. Three of this number, having reached the age limit, have been sent on to other schools, and 3 residents and 1 day pupil have been admitted.

The aim of the management is twofold: the first is to create a real home for deaf children too small to be admitted to the larger institutions, — a home where the smallest child admitted may never miss the love and special understanding and care due him; where the child's character, health, habits and manners may be looked after, and where he may lead a happy family life in an atmosphere of love and sympathy; wherefore we limit the number of children, and aim only to make it a model for similar homes which we hope may be started from ours. All visitors to the home are impressed with its ideal home-like character and with the responsiveness and naturalness of the children. To this carrying out of our ideal for the home we are greatly indebted to our matron, Miss Clark.

The second aim is to begin to reach the little minds at the earliest possible moment, before habits of sign using and bad articulation are formed. As our teacher, Miss Aymar, says: "Children under five years of age have quick, active brains, only awaiting development, and this development, as with speaking children, comes through the use of language. Long before anything like perfect articulation is acquired, they can obtain a vocabulary." We have found the children more eager and more able to learn, and with greater powers of concentration, than with hearing children of the same age. Under Miss Aymar's care they have made most satisfactory progress.

A bequest of \$3,000 from Mr. William A. Donald, administrator of the estate of Lucy C. Coburn, is gratefully acknowledged.

Our trees have been kept reasonably free from the gypsy moth by Gen. Samuel C. Lawrence, to whose kindness and generosity we are much indebted.

MARY H. COOLIDGE.

# NEW ENGLAND INDUSTRIAL SCHOOL FOR DEAF MUTES.

By a resolve of the Legislature of 1907, \$3,500 was granted to this school upon approval of the State Board of Education. The account under authority of this resolve is rendered by the treasurer, Mr. Samuel P. White, as follows:—

NEW ENGLAND INDUSTRIAL SCHOOL FOR DEAF MUTES, BEVERLY, MASS.,  
*in Account with COMMONWEALTH OF MASSACHUSETTS, for the Year 1907.*

*Dr.*

July, To annual appropriation, . . . . .	\$3,500 00
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*Cr.*

To amounts paid for teachers' salaries and wages of help, . . . . .	\$3,402 53	
To sundry expenses of home, including groceries, coal, etc., . . . . .	97 47	
		<u>\$3,500 00</u>

*Extract from the Annual Report of the Principal of the School to the Board of Trustees, Dec. 31, 1907.*

There have been in attendance at one time or another during the year 36 pupils,—17 girls and 19 boys. The present enrollment is 32,—consisting of 17 girls and 15 boys.

The course of instruction remains substantially the same. New pupils are placed in the care of an oral teacher, and are encouraged, so far as their acquirements will permit, to use speech themselves and to read the speech of others. They must be assisted in this by habituating themselves to the reading of books and papers, and we have made a special effort to familiarize them in this way with a simple and unrestrained expression of ideas. Mrs. C. C. Converse of Malden has aided us in this direction by adding to our supply suitable and interesting books. Further additions to our library would be much appreciated.

All the girls are taught to sew by competent instructors, the younger girls learning the simple stitches and the older ones taking up general sewing, mending, dressmaking and the use of the sewing machine. The girls also continue, as heretofore, to perform such household duties as

are consistent with their school work proper, and I take pleasure in testifying to the willingness and good nature shown by them in all their work.

Through the generosity of the president, the sloyd work has been continued under the direction of Miss Esther W. Sheldon, the aim being to have this department conducted on simple, practical lines, such that their training may be of real assistance to them when they leave the school. At Christmas time the sloyd pupils gave a number of well-finished and useful articles to the school. One of the boys who took up shoe repairing last year has made such improvement that this year he is able to do nearly all the repairing needed on the children's shoes. Considerable work in chair caning has been done, both for the school and for others. Two of our last year's pupils are to-day employed near their homes and are self-supporting.

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#### BOSTON SCHOOL FOR THE DEAF.

REPORT OF THE SUPERINTENDENT FOR THE YEAR ENDING SEPT. 30, 1907.

*To the State Board of Education.*

The Boston School for the Deaf, at Randolph, Mass., opened the school year of 1906-07 with 89 pupils. During the school year 26 pupils were admitted, 11 were discharged and 2 died, leaving 102 pupils on the roll Oct. 1, 1907.

The progress made by the children during the year has been very satisfactory. This is not only the opinion of the board of directors, but also that of visitors to the school, who are competent judges. The children are strong, healthy and happy, and have seldom required the services of a physician. I recommend that the board of directors be authorized, at the expense of the State, to employ at a reasonable cost an oculist and an otologist to visit the school occasionally during the year. The parents of the pupils are very careless in this matter, and during the past year it was necessary to bring several of the children to Boston for treatment of the eye, ear, nose and throat, at the expense of the corporation. Medical attendance other than in these special branches is furnished to the children without charge.

Respectfully submitted,

THOMAS MAGENNIS,

*Superintendent.*



PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL  
FOR THE BLIND.

EDWARD E. ALLEN, DIRECTOR.

At the opening of the present school year, Oct. 1, 1907, there were 317 blind persons registered in the Perkins Institution for the Blind. This enrollment included 178 in the main school at South Boston, 120 in the kindergarten at Jamaica Plain and 19 in the workshop for adults. These numbers may be thus subdivided:—

Pupils in the boys' department,	80
Pupils in the girls' department,	86
Children in the kindergarten,	120
Teachers and officers,	10
Domestics,	2

Beneficiaries of Massachusetts:—

At the beginning of year (Oct. 1, 1906),	190
Admitted during year,	25
Discharged during year,	29
Transferred to another State,	1
At the present time,	185

The Perkins Institution has passed a year of general progress and prosperity, and now, at the beginning of a new twelvemonth of activity, it faces a period of still greater promise of growth and achievement. With the opening of the school term a few minor changes have been inaugurated which, it is believed, will work out beneficially. The school day has been somewhat shortened, and the literary work divided into half-hour periods for the younger pupils, both these things encouraging everybody concerned to vigor of attack. There have been discharged the few unimprovable pupils discovered here, and the merely backward weeded out of the school grades and made into a special class, having their own teacher and class room. The whole school body has been regraded, some studies, as chemistry, dropped from the course, and others, like business, added; and the pupils having special instruction in music and piano tuning are gradually being limited to those really fitted for such training.

All pupils are now undergoing a general medical examina-

tion. For the boys, early morning cool shower baths have been instituted and are popular. A few pieces of yard apparatus have been set up for them. For both boys and girls a few field sports, in which teachers regularly participate, have been introduced, to supplement the more formal gymnasium work, in spite of the very limited space which the institution grounds afford for games of any kind. Indeed, the inadequacy of the area for sports, and the limitations and inconveniences of the old building, have so impressed themselves upon the trustees of the institution, in contrast with the ideal surroundings of some other schools, where air, light and space have been amply secured, that they are earnestly advocating the removal of the entire plant to some more favored spot, where the natural and necessary expansion both of the individual and of the establishment may be provided for.

A vigorous and independent manhood or womanhood, founded upon sound health and a strong physique, and expressed in mental power, in work and achievement and in good citizenship, is the ideal which is held for every individual pupil of the institution, and toward which its teachers and officers are striving.

The Howe Memorial Press has this year published an "Elementary French Grammar" and a "Memoir of Michael Anagnos;" printed from old plates a second edition of "Heidi" and of the first volume of Whittier's "Poems;" and issued eighty-seven musical selections, printed from plates which had been embossed in the music department.

To meet the constantly increasing demand for literature published in the Braille system, a new power stereotypemaker has been ordered for this office, and as soon as it is installed the amount of text-books and reading matter in Braille will be speedily augmented, with improvements as to the size of the page and the character of the printing.

The work of instructing the adult blind in their homes is still carried on under the management of this institution. Four teachers are constantly employed in traveling from place to place in the different sections of the State, giving regular lessons to their pupils and offering the inspiration and encouragement of their own ability to rise above the same great misfortune, — the loss of sight. The latter is an important part

of their mission, and their success in awakening their pupils to a sense of the latent power within them and to a desire to be up and doing has been marked. They teach reading, writing by means of pencil, typewriting or Braille slate, and some forms of handicraft which may serve as occupation if not as beginning toward the self-support so eagerly craved by nearly all the adult blind, and seldom denied to those who are able-bodied and courageously put forth a sustained and earnest effort to achieve success.

The enterprise is hampered by the insufficiency of the appropriation, but the sum is greatly augmented and rendered more effective by the assistance of the New York, New Haven & Hartford Railroad, in allowing the blind teachers and their guides to travel over that road at special rates; by the Perkins Institution, which gives material from its schoolrooms and library and the services of its clerical force in aid of this work; and by individuals everywhere, who lend a helping hand in making the benefits of the undertaking reach as large a number of adult blind persons as possible under the circumstances.

The school has now three deaf-blind pupils, two of whom, Nellie Winitzky and Louis Yott, belong to the State of Massachusetts and are provided for by the appropriation made for such doubly afflicted children, while the third, Thomas Stringer, is dependent for the continuance of his education upon the benefactions of friends, who have not yet failed to respond to his needs and whose loyalty to the unfortunate lad is a source of gratification to those having his welfare at heart. All these children are doing good work under the guidance of the special teachers engaged as their constant companions and interpreters.

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#### INSTRUCTION OF THE ADULT BLIND AT THEIR HOMES.

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND,  
SOUTH BOSTON, Jan. 1, 1908.

*To the State Board of Education.*

The work of instructing the adult blind in their homes has been carried on by the same trained teachers, graduates of the Perkins Institution, whose experience in this field of labor,

gained through several years of service, enables them to do it well.

The fundamental aim of the work has been to give instruction in reading which should furnish occupation and solace to these blind men and women during many hours of enforced solitude and idleness, and at the same time relieve other members of the family, often hard-working bread-winners, from constant attendance upon them; but the instruction has not stopped there. With awakened courage and ambition the pupil is usually not content to limit his efforts to learning to read, but goes eagerly on to acquire some form of handicraft which may be the means of bringing in a little money. In the case of the men this secondary effort most often takes the form of cane-seating; with the women, knitting or sewing. Other kinds of manual occupation may follow. Although it is seldom possible for any of these people to become self-supporting by such means, the fact of actually earning something for themselves by the work of their own hands gives them a tremendous uplift.

In learning to read, the Moon alphabet has been found invaluable as a starting point. In the case of those who develop the desire to go farther, and whose fingers have not been hardened by heavy labor, this form of embossed type may later give place to the more arbitrary Braille, in which a richer field of literature exists. The length of time and number of lessons needed by the pupils differ greatly, as does their motive in seeking aid. Some require only a little showing at the outset and are then prepared to go on by themselves. For these one or two lessons suffice. Others, plunged into the depths of despair by their heavy loss, must first be roused from apathy and fired with courage to take their first feeble steps. For such, a long course of instruction has been found necessary. There are various causes for such slow progress. One may be the infrequency of the lessons; another, the hardened finger-tips of the pupil; and still another, his inability to follow the printed line across the page, for his untrained finger, unaccustomed to moving forward in the dark, is quite likely to lose the place, and drop gradually from line to line until meaning is lost and courage is exhausted. But all are anxious to learn to read in as short a time as possible, and in the end nearly all succeed in doing so.

A most important feature of this work is the fact that the teachers themselves are blind. Mrs. Sophia Shaler, in the introduction of her book, "Masters of Fate," has truly said of those who are burdened with grave disabilities that "the sense of their handicap was a load that needed to be lightened." This can best be done for the adult blind by offering to them the object lesson of a brave, self-reliant, blind teacher, capable of achievement for herself and of offering service to others. The realization that such is the case often comes to them as a complete surprise after an appreciable time of conversation and perhaps actual work. "Why, honey, is you blind?" exclaimed an old colored woman, a prospective pupil. "Why, you talk just as peart-like as anybody else!" The effect of this realization is immediate. The blind pupil becomes ashamed of his complaints and slothfulness, and the first step is taken toward a more hopeful outlook.

This mission of the sightless teacher cannot be overestimated, for it plays an invaluable part in helping these blind men and women to assert themselves to gain some degree of independence, — perhaps to undertake afresh their accustomed occupations, even though it be under changed and difficult conditions.

The librarian of the Perkins Institution has continued to supply readers with all they desire of embossed books, either carried to them by the traveling teachers or sent through the mails.

It so happens that the results achieved this year have exceeded those of any other similar period. This fall the plan of working has been only slightly improved in the direction of economy and efficiency; however, the whole scheme is being studied from the Perkins Institution, both with reference to further improving it and to learning whether or not the State mission to the adult blind at their homes really belongs to this school to administer or to the State Commission for the Blind, which has come into existence since the work was inaugurated.

The names and addresses of the teachers are as follows: Miss Lillian R. Garside, No. 57 Pearl Street, South Framingham; Miss Lydia Y. Hayes, No. 85 Central Street, Somerville; Mr. Edward Schuerer, No. 15 Warriner Avenue, Springfield; Mr. John Vars, No. 72 Huntington Avenue, Boston.

*Statistics.* — Number of blind persons visited, 98; number taught, 74; number refusing instruction, 24; number enrolled Nov. 1, 1907, 112. Number receiving instruction: in the several systems of reading, 149; writing, 41; sewing, 32; knitting, 45; crocheting, 2; use of the sewing machine, 5; musical Braille, 2; tuning pianofortes, 1; playing upon the violin, 1; reseating chairs with cane, pith or splint, 40; basketry, 12; netting, 6; tatting, 1; braiding rugs, 1. Amount of money earned by the pupils, \$200. Summary of work done by the teachers: calls made, 858; lessons given, 1,879; miles travelled, 49,199.

All which is respectfully submitted by

FRANCIS HENRY APPLETON,  
WALTER CABOT BAYLIES,  
WILLIAM L. BENEDICT,  
WILLIAM ENDICOTT,  
PAUL REVERE FROTHINGHAM,  
CHARLES P. GARDINER,  
N. P. HALLOWELL,  
GEORGE H. RICHARDS,  
WILLIAM L. RICHARDSON,  
ANNETTE P. ROGERS,  
RICHARD M. SALTONSTALL,  
S. LOTHROP THORNDIKE,

*Trustees.*

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The foregoing reports cover the work of State institutions for defectives required to be supervised by the Board of Education. But there are other State institutions which have been visited by agents of the Board from time to time during the past few years and upon which it has been customary to make some report. One of these institutions is the School for the Feeble-minded at Waltham. The superintendent has kindly furnished proof sheets of his forth-coming report, from which extracts are made, as follows: —

THE MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED,  
WALTHAM.

EXTRACTS FROM THE REPORT OF THE SUPERINTENDENT, DR. WALTER  
E. FERNALD.

	Males.	Females.	Totals.
Number present Nov. 30, 1906, . . . . .	677	470	1,147
Admitted during the year, . . . . .	133	89	222
School cases, . . . . .	83	33	116
Custodial cases, . . . . .	50	56	106
Whole number of cases during the year, . . . . .	811	558	1,369
Discharged during year, . . . . .	79	24	103
Died during the year, . . . . .	17	15	32
Number present Nov. 30, 1907, . . . . .	715	519	1,234
State patients, . . . . .	—	—	240
City and town patients, . . . . .	—	—	410
Private patients, . . . . .	—	—	50
Massachusetts school beneficiaries, . . . . .	—	—	473
New England beneficiaries, . . . . .	—	—	47
Invested funds, supported by, . . . . .	—	—	14
Daily average number of patients, . . . . .	—	—	1,187
Number Nov. 30, 1907, at school, . . . . .	521	519	1,040
Number present Nov. 30, 1907, at colony, . . . . .	194	—	194
Applications during the year, . . . . .	—	—	455

Of the admissions, 85 were young, teachable pupils; 50 were females over fourteen years of age and 36 males over fourteen years of age, a large proportion of these adults being improvable cases; 16 were cases of spastic paralysis, 5 were hydrocephalic, 2 were microcephalic, 6 were of the Mongolian type of idiocy, 3 were totally blind, 2 were insane and not feeble-

minded, and 26 were feeble physically and more or less untidy and destructive.

Included in the admissions were 15 cases from the State Industrial School for Girls, 3 from the Lyman School for Boys and 9 from the State Hospital at Tewksbury.

Under instructions from the State Board of Insanity, we have declined to receive cases of epilepsy for the past year, but 8 of the cases admitted proved to be subject to this disease. Of our total number of 1,234 patients at the end of the year, we have over 100 who are subject to epileptic attacks more or less frequently. In some of these cases the attacks are infrequent and only incidental to the mental defect. In 61 cases over ten years of age — 28 males and 33 females — the patients are confirmed epileptics. There is a probability that these adult cases may be transferred to the special institutions for epileptics. Confirmed epileptics do not classify well with ordinary defectives. In this, as in former years, epilepsy has been the cause of death in quite a number of cases.

The applications for the year numbered 455, the largest number in the history of the institution.

Of the 103 cases discharged during the year, 55 were kept at home by their friends for various reasons, 2 were kept at home to attend public school, 2 were committed to insane hospitals, 2 were discharged as insane and not feeble-minded, 1 was taken away by the overseers of the poor of the town, 1, a New England beneficiary, was removed to make room for a younger pupil, 11 went to work for wages, and 11 young, promising pupils were transferred to the Wrentham State School. At this new school for the feeble-minded these brighter adolescents, as graduates of the training department of this school, will assist in the development of the new institution.

Eighteen male patients ran away and were not returned. Of this number, 4 are working for wages, and, so far as we have been able to learn, are conducting themselves properly and doing well generally; 2, of the criminal type, were promptly arrested and are now serving time in penal institutions; 9 went to their homes, where they are behaving fairly well; 1 went to Nova Scotia, where he is now at work and doing well;



1 has since been committed to the town almshouse by the overseers of the poor; 1, a case of the moral imbecile type, has disappeared and nothing has been heard from him.

In estimating the value of our educational work, it should not be overlooked that a large number of our pupils, who have received great benefit from our school work, are taken home by their relatives or friends after the period of school work is past. The cases who remain at the school are those who are not suitable for community life or those who have no friends to care for them.

The friends of the pupils discharged during the year have been free in their expression of satisfaction with the results of the school training. We have received more letters of this sort during the past year than for many years past. These letters of approval generally refer to the practical usefulness and the good behavior of our former pupils.

The general health of the inmates and employees has been good. We have had a few cases of serious illness. Ten cases of typhoid developed in one of the detached buildings, in a building where the patients are very feeble physically. These cases probably developed from one unrecognized case of so-called "walking typhoid." There were three deaths, all of children very frail physically. We had 3 cases of diphtheria, with no deaths, and 1 case of scarlet fever, who made a good recovery. There were no other cases of contagious or infectious disease.

Of the 32 deaths during the year, 5 were from epilepsy, 4 from acute pneumonia, 3 from organic heart disease, 3 from typhoid, 3 from general tuberculosis, 2 from cerebral hemorrhage, 2 from pulmonary tuberculosis, and 1 each from influenza, acute peritonitis, erysipelas, hematemesis, chronic valvular heart disease, sarcoma, meningitis, tubercular meningitis, acute endocarditis and rupture of the internal viscera, the injury being received in a coasting accident.

The following table shows the ages of the 1,234 inmates in the institution at the close of the year ending Nov. 30, 1907:—

	Males.	Females.	Totals.
Under 5 years, . . . . .	5	3	8
From 5 to 10 years, . . . . .	100	44	144
From 10 to 15 years, . . . . .	195	106	303
From 15 to 20 years, . . . . .	181	143	324
From 20 to 25 years, . . . . .	111	103	214
From 25 to 30 years, . . . . .	64	45	109
From 30 to 35 years, . . . . .	32	25	57
From 35 to 40 years, . . . . .	14	28	42
From 40 to 45 years, . . . . .	7	11	18
From 45 to 50 years, . . . . .	5	4	9
Over 50 years, . . . . .	1	5	6
	715	519	1,234

The school year has been a very happy and prosperous one. Our large family has been blessed with good health. We have received a large number of teachable pupils. The new buildings added during the past few years permit a very satisfactory grading and classification of our pupils by age, mental and social capacity. We have had an unusually loyal, zealous and efficient staff of officers and employees.

The work of the school and training classes has been carried on with enthusiasm and ability. The manual and industrial work described in the last annual report has been materially developed and increased.

Perhaps the most important educational department of our school to-day is the handwork room, devoted to the manual training of the large group of middle grade girls. Many of these girls have not been able to learn to read or write, or to sew, or to perform any of the finer domestic arts, and 250 of them receive daily instruction in this room. They come in groups of 15 or 20, with their attendant, and have one or two hours' training each day. They are taught to knit, to crochet,

to cut rags for weaving rugs, or for braiding or hooking rugs. They are taught to braid and to hook the rugs, and to use the loom which makes the attractive rag carpets. We have made many beautiful rugs and strips of carpet, which are at once put to use in our buildings. This work—using material which does not cost money and produces fabrics of very practical use—has been a very satisfying addition to our industrial work. On the knitting machines our girls have made all the mittens and winter caps required by our 1,200 patients for the winter. We expect at once to begin the knitting of the stockings used by our patients. The wristers, hoods and mittens knitted by hand would do credit to any class.

It is not easy to describe the deep interest and enthusiasm shown by the children in this work. Weaving seems to be peculiarly adapted to develop the power of self-control, of patience and of accurate motor response in the feeble-minded. We have two looms in the boy's department, on which the boys are weaving some first-class crash for towelling. In the new spacious quarters for manual training we hope to extend this work still further.

During the year we have greatly developed the elementary manual training of the boys who are not ready for sloyd work or who are not capable of doing sloyd work, but who are capable of learning to use common tools with interest and a certain amount of intelligence. We have over 190 pupils receiving daily this practical instruction in the use of tools. In many cases a boy for the first time shows self-control and intelligent interest after being given these simple exercises. It is gratifying to report that already 20 boys have left this elementary class to enter the regular sloyd work. Two instructors devote their entire time to the training of the boys in this department.

Our new manual training building, which will be ready for occupancy some time during the winter, will give us eight additional rooms for manual training, six rooms 30 by 40 and two rooms 18 by 22, all well lighted and ventilated.

The systematic musical training introduced last year has proved a very great success. In the music room, Miss Boynton has given her entire time to the instruction of groups of children in vocal and instrumental music. These classes have been

made up of boys and girls of different ages, graded according to their age and musical ability. Altogether 261 pupils receive this musical instruction. The children have shown great interest in this work and have already developed quite remarkable proficiency. The work of the combined classes in part songs and in chorus work would do credit to any school. There are over a dozen girls learning to play the violin and other instruments, and we already have the nucleus of a very good orchestra. The performance of these pupils has contributed very much to the enjoyment of the other children. The pupils in these classes have been absorbingly interested in this musical study and drill. It has done much to pleasantly fill their thoughts and lives, and has greatly added to their self-respect.

The two new dormitories were occupied in November and December, respectively. Some of the temporary rooms for employees in the wards at the boys' home will be removed as soon as the two new buildings for male employees are completed, and this space will then be used for ward purposes.

The two new nurses' homes, authorized by the last Legislature, were completed and occupied early in June. Each accommodates 21 nurses.

The addition to the farmhouse is under construction and will be completed before summer.

The additions to the manual training building and the hospital and laundry are under construction and will be ready for use within a few months.

It is a pleasure to record another successful and happy year for the farm colony at Templeton. We have had no cases of serious illness and no serious accidents, and the boys have been well and happy. They are now jubilant at the successful result of their year's work.

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APPENDIX G.

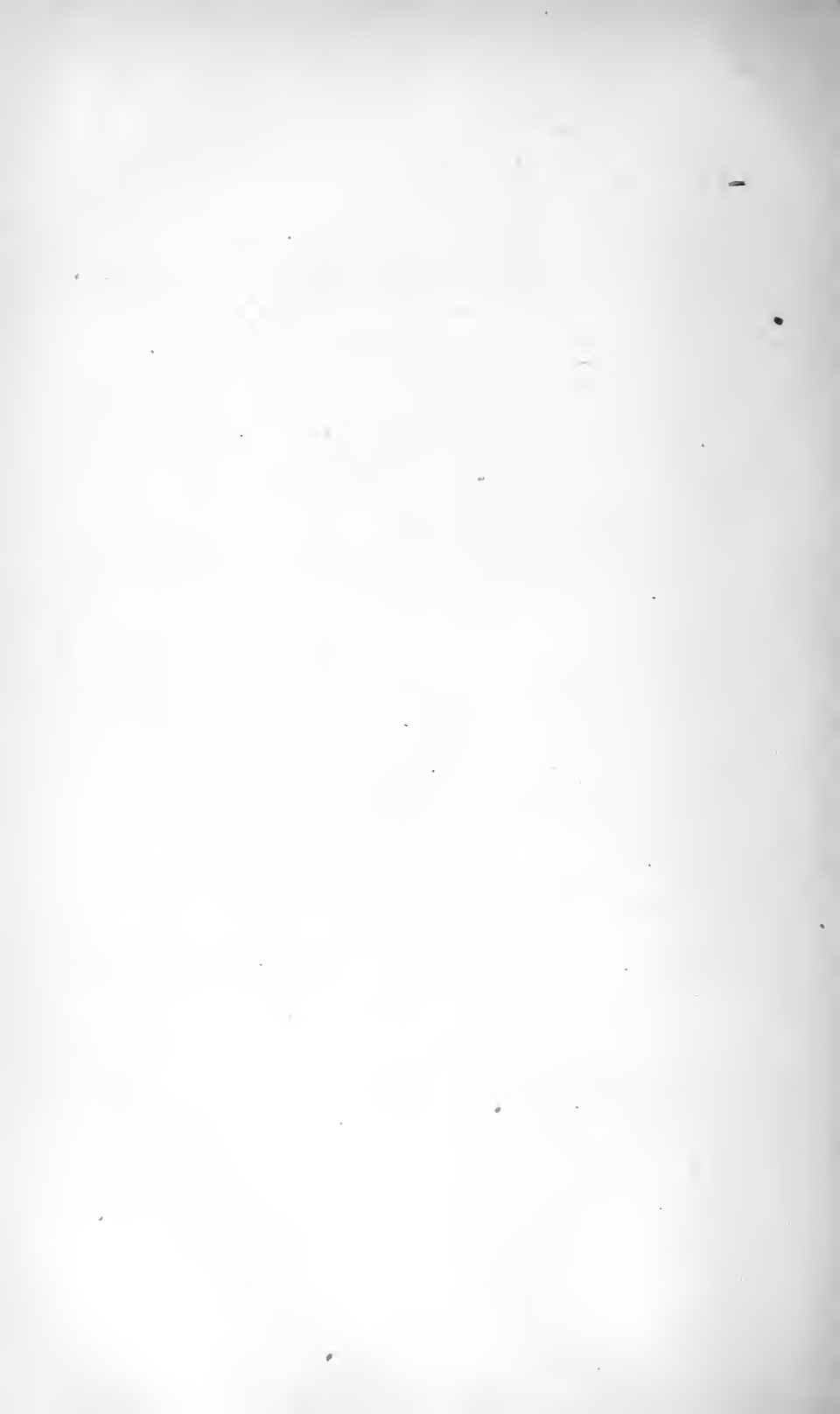
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THE RELATION OF  
THE  
MASSACHUSETTS HIGH SCHOOL  
TO  
COMMUNITY NEEDS,

WITH ESPECIAL REFERENCE TO THE DEMAND FOR THE  
SO-CALLED PRACTICAL SUBJECTS.

ABSTRACT FROM A REPORT OF A SPECIAL COMMITTEE OF THE MASSA-  
CHUSETTS COUNCIL OF EDUCATION, MARCH 14, 1908.

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## THE RELATION OF THE MASSACHUSETTS HIGH SCHOOL TO COMMUNITY NEEDS.

Massachusetts has built up, in little more than half a century, a public high school system whose extent, importance and influence are shown in some measure by the following statistics for the year 1905-06: —

Number of high schools, . . . . .	263
Number of teachers in high schools, . . . . .	1,898
Number of pupils in high schools, . . . . .	47,543
Expenditures. . . . .	\$2,556,173.22
Increase of high schools in year 1905-06, . . . . .	1
Increase of teachers, . . . . .	78
Increase of pupils, . . . . .	2,144
Decrease of expenditures, . . . . .	\$14,494.22

### CLASSIFICATION OF HIGH SCHOOLS.

Inasmuch as the size and character of the community and the equipment, teaching force and organization of the high school constitute important elements in the investigation, the committee decided to deal with the schools in five groups, based on number of pupils enrolled. These groups were made up as follows: —

GROUP.	Enrollment.	No. of teachers.	No. of pupils.	Estimate of average annual expense.
I. (81), . . . . .	50 or less,	165	2,373	\$1,000 to \$1,500
II. (63), . . . . .	50 to 100,	207	4,318	3,000 to 4,000
III. (57), . . . . .	100 to 250,	341	8,563	6,000 to 8,000
IV. (25), . . . . .	250 to 500,	328	8,905	15,000 to 20,000
V. (37), . . . . .	500 or more,	857	23,380	30,000 to 40,000

It will be seen that of 263 schools 201 are included in the first three groups, and may be regarded as small high schools in rural or semi-rural communities. One third of the high school population of the State is in attendance on these schools.

Group IV. may be regarded as made up of high schools of moderate size, while the last group, containing schools of 500 or more, is the one most commonly in mind in all discussions of secondary school questions. But the schools in greatest need of support, guidance and control are those of the three smaller groups, with certain schools of the fourth group. A statement of the teaching force available per school in each group will show the limitation set on courses of study and breadth of curriculum in at least 200 high schools. The figures are estimated averages.

*Teaching force in Massachusetts high schools.*

GROUP.	Teachers per school.	Pupils per teacher.
I., . . . . .	2	14 to 15
II., . . . . .	3	21
III., . . . . .	6	25
IV., . . . . .	13	27
V., . . . . .	22+	27+

A study of reports from the schools shows that in many cases in the first two groups there are no men teachers employed. The principalships are falling into the hands of women. It is no reflection on the ability, devotion and skill of the woman teacher to say that the secondary school in the small community needs the masculine influence in its instruction if it is to do effective work and maintain a proper leadership among the young people of its town.

#### PLAN OF INVESTIGATION.

As a means of securing information at first hand in regard to the attitude of school people towards the local needs and conditions, and the ability to meet the demands for better adaptation to such needs and conditions, the following circulars and letter of inquiry were sent to every superintendent in the State, and in such a manner as to reach every high school:—

MY DEAR SIR:—The Massachusetts Council of Education is making a study of the high schools of the State with reference to the demand for practical subjects. The investigation is along the following lines:—



1. What shall be the curriculum of a general high school in communities where special schools of commerce and manual training cannot be supported? What elements of commercial and manual training and other technical instruction shall be recognized in such a course?

2. To what extent is it desirable that communities should maintain separate and distinct high schools of commerce, manual training and domestic science?

3. How far may the high school, with good results, modify its curriculum with reference to local conditions and needs? This adjustment may be in subjects of the curriculum or in the particular treatment of individual branches.

To illustrate: the teaching of physics can be varied greatly as to topics presented and illustrations used. In Pittsfield there are large electrical establishments; the same is true of Lynn. Should not the teacher of physics in such places plan the course so as to make the largest possible use of the facilities thus afforded? Again, botany along modern lines should find a large place in the country high school.

4. To what extent can recognition of the so-called practical subjects be secured in requirements for admission to college?

The committee will greatly value your judgment on these questions, especially as they relate to your own field of work.

May we ask you, after conference with the high school principals in your district, to send us your statement? It is also requested that you fill out the following blank, one for each high school in your charge.

#### REPORT ON MASSACHUSETTS HIGH SCHOOLS.

Name of school, .....

Address of school, .....

Name of principal, .....

Number of pupils: boys, ....; girls, ....; total, .....

Number of teachers: men, ....; women, ....; total, .....

Annual expense, .....

Course of study (kindly send printed form).

What changes would you suggest in view of the demand for business, manual training and domestic courses?

How may the school best meet local needs and conditions?

Reported by, .....

Replies were received as follows:—

Group I., . . . . .	27 out of a total of 81 schools.
Group II., . . . . .	27 out of a total of 63 schools.
Group III., . . . . .	28 out of a total of 57 schools.
Group IV., . . . . .	13 out of a total of 25 schools.
Group V., . . . . .	16 out of a total of 37 schools.

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111 out of a total of 263 schools.

While only 42 per cent. of the schools are represented in the replies, these are so widely distributed and represent so many types of communities as to give a fairly full and accurate view of the high school situation in Massachusetts.

The attitude towards manual training, domestic science and commercial studies is interesting, and the frequent references to vocational courses show a significant trend in popular opinion and in the views of principals and superintendents.

A digest of the replies is given herewith under the head of each group.

*Question 1.* — There is a general desire that manual training, domestic science and business studies should be introduced, and there are demands in several cases for agricultural and trade courses. But there is also frank recognition of the inability of many schools to extend the present curriculum, and in many cases pathetic acknowledgment of the pressure on teachers and community to carry out the existing program.

*Question 2.* — The consensus of opinion is in favor of the general high school with broad courses, as against special schools.

*Question 3.* — There is an earnest wish to utilize the facilities afforded by the school surrounding and local industries in the work of instruction, but no clear idea or definite plans as to how such a program can be best framed and executed.

*Question 4.* — The demands of college preparation are regarded as hampering the high school as a local institution, but few school people see any way of escape.

The following extracts from the replies will show the attitude of the authorities in the first group of schools: —

### *Group I.*

The general statements from superintendents familiar with local conditions are of interest, and these are given herewith.

1. After conference with my high school principals I would say: (1) That in a community where special schools of commerce and manual training cannot be supported, the curriculum of a general high school should include commercial and manual training subjects. (2) That to my mind it is better to have the technical subjects in the curriculum

of a general high school up to the point where the membership of the school would be too large to be under one roof; then it would be better to have the different kinds of high school located near each other, that pupils may attend, without too great inconvenience, recitations in any of the buildings. (3) There is a crying need that the treatment of all the subjects of our high school curriculum should be less abstract; that the principles taught should be illustrated by concrete application to things of common life and of local conditions. (4) To the extent to which improved teaching of the subjects shall avail to make the new subjects valuable for mental training. In physics I have requested our teachers to follow the suggestion of Mr. MacDonald. In chemistry the chemical elements of many articles of food, as potato, might be easily ascertained, and the purity of the water supply might be tested by the pupils. In botany we are using the outlines by Wood, called "The High School Biology Leaflet."

2. In reply to circular relative to a demand for practical subjects in the high school, I submit the following: (1) Meet State requirements. Give best possible additional courses in history, science, English and modern languages, so as to afford a good fit for agricultural schools, technical schools and common life work. (2) Only to a somewhat limited extent. (3) No high school can afford to neglect the essentials of a thorough education. Quite a number of subjects will admit of enlargement, change and enrichment, but this must not be done at the expense of fundamentals. To illustrate: a certain amount of technical drill in chemistry or botany is necessary in order to lay a solid foundation upon which it is possible to build a superstructure of scientific work. Unless this fundamental work be done thoroughly the superstructure will be only a shadow. I apprehend that at this point lies the difficulty in the so-called industrial education. Experience leads me to think that many people imagine that industrial education will find a short cut to knowledge, success and wealth that the present high school does not point out. (4) I do not think that so-called practical subjects ought to have much weight in gaining admission to college because they are not fundamental.

3. Much has been done in our schools to connect with home and occupation. Nature study and drawing, with some of the simplest forms of manual work, are to be found in our grade schools. The arithmetic, bookkeeping, drawing and sciences in the high school are designed to furnish an explanation of facts that pupils meet in daily life, and to form the basis of a preparation for industrial pursuits. We have been acting on the theory that the function of the small high school is to secure culture and general preparation, and that by a wise choice of elective subjects a pupil may make his preparation bear on his plans for life. If, as is usually the case, he has no plans, the general preparation will help him to choose a career. It has seemed to

me that by a skillful use of the subjects we have in our course of study the rough-and-ready knowledge of capable country children, which they have gained in the performance of the manifold home duties, may be rendered somewhat exact and scientific, and that their tastes will be refined and their technical skill increased by the training in drawing, so that at the end of the course they will be fitted for the technical, normal or business school, the classical or agricultural college, or to enter the school of further experience. We have assumed that with the small amount of money available we cannot prepare a part of the students for a particular vocation without injustice to those who have other plans. I do not see how we can do all that we are now doing and add practical training in farming and housekeeping, and I am not ready to abandon our present plan of broad preparation and adopt a technical program until I know more about the practical working of the "schools of agriculture."

*Group I.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
A, . .	14	7	21	-	2	2	Changes not practical at present. Greatest need to keep pupils in school. Agriculture might be helpful.
B, . .	14	8	22	-	2	2	More bookkeeping, chemistry, physics and botany. Young people will not settle on farms, so general education perhaps as well, though not ideal.
C, . .	13	15	28	1	1	2	People would not support anything less than a general high school. Agriculture needed, typewriting, domestic science, manual training.
D, . .	18	18	36	1	-	1	"We have only a two years' course, sending to Fall River or New Bedford for last two years." Insufficient force to do present work well.
E, . .	9	10	19	1	-	1	
F, . .	12	9	21	-	1	1	"I would introduce manual training and industrial preparation suited to a farming community."
G, . .	14	16	31	-	3	3	Stricter entrance requirements. Two hours of some kind of manual training. Need training to support themselves at once.
H, . .	13	26	39	1	2	3	Planning new building to have rooms for domestic science and manual training, latter partly along agricultural lines. Commercial course is popular and saves later expense. Few go to college.
I, . .	15	17	32	1	1	2	Manufacturing community, French Canadians. Should like manual training and domestic science (much needed), but see no way of obtaining instructors.
J, . .	14	15	29	-	2	2	Fighting for a new building, then an agricultural high school, with manual training and domestic science. Should drop last two years of Latin. General course is about as effective on the whole, as no one course hits majority of pupils.

*Group I. — Concluded.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
K, . .	29	21	50	1	2½	3½	Woodworking, use and care of various tools, increase in apparatus for science departments, cookery, domestic economy, sewing and agricultural instruction; teachers and equipment for same. Increase of English.
L, . .	20	23	43	1	1	2	Greek to be dropped; more instruction in natural science, commercial course and provision for agriculture, manual training and domestic science. Less classics.
M, . .	7	11	18	1	4	5	Practical subjects taught about two hours weekly. "All alive to call for the practical," but present English-Latin course best at present. Pupils for college each year, one or more.

*Group II.*

The schools of Group II., those with an enrollment of 50 to 100 pupils, show in their replies much the same attitude towards the mooted questions as do those of Group I. There is more satisfaction with the work of the school. In a number of instances business studies have been introduced, and much interest is expressed in this departure from traditional courses. Academies, however, take a conservative position as regards modern subjects. Some positive convictions on college entrance requirements are expressed. A study of certain replies will show the condition and aspirations of these schools.

*Group II.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
A, . .	27	26	53	1	2	3	Should be both manual training and domestic science. College requirements stand in way of meeting demands for practical subjects in small high schools.
B, . .	28	39	67	1	1	2	Statistics for twelve years, — 45 per cent. girls did housework, 15 per cent. boys pursued agriculture, 30 per cent. boys and girls entered business. To meet these demands a new building and equipment is needed.

*Group II. — Concluded.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
C, . .	17	57	74	1	4	5	"I believe we should add manual training and technical courses as soon as our commercial course is fully established." Needs should be studied from standpoint of local industries and young people in their homes.
D, . .	28	33	61	2	3	5	"Our business course is just started; we may suggest changes later." Best meet needs by giving best and broadest foundation upon which the scholars can build after leaving the high school. More lines of work as opportunity offers.
E, . .	41	50	91	4	4	8	Would leave all "business" instruction to business schools. Would institute two years' courses in manual training and domestic science. Best to give a general training in science and academic studies.
F, . .	35	40	75	1	2	3	"I would suggest that the State help us to establish such courses by giving assistance financially if such courses are established." "By fitting pupils for college, normal schools and technical schools (a few); by better fitting pupils for a life which will not take them to any of these institutions (a large number). Courses of study in manual arts, mechanics, agriculture, domestic science, will do this, but if we have to maintain courses to fit pupils for colleges, etc., our energy, time and ingenuity are largely used up before it is completed; more teachers is the solution."
G, . .	35	45	80	1	3	4	We have a four years' business course; wish might have courses in woodworking and domestic science. A trade district school suggested to fit students for work.
H, . .	36	42	78	2	4	6	Not much can be done in additional courses, though trade influence is met by commercial course, and manual training has been put into grammar grades. Changes must be by substitution rather than by additional courses.
I, . .	25	30	55	1	3	4	In our small school success depends on concentration rather than on diversity. As new courses are given they shall be in the direction of "practical" courses. "Many of our boys 'do chores' at home — fortunately — and need such courses less."

Special reports are added because of their discussion of the broad question of high school efficiency.

1. We secure the desired course at the Petersham Agricultural High School by correlating the agricultural work with the legitimate branches

in the course. Strictly speaking, we hang our agriculture on physics, botany, chemistry, zoölogy, geology, domestic science, manual training and astronomy, or, from our standpoint, we correlate all these studies with agriculture, allowing five periods a week for four years for the course. In this way we do not cripple our high school course in the least but vivify and strengthen it. Our agriculture gives a means of applying and illustrating all these branches.

2. If it is true, as so many educators have said, that the high school is the people's college, then the curriculum should be just as broad in sciences, commercial and manual training courses as the patrons can support. Not to make bookkeepers or carpenters of the pupils, but because many pupils attain that mental training and habit of application and moral uplift — which is the end of all our work — by these subjects who do not progress with the same interest in ancient languages. I believe that the curriculum should be modified to suit local conditions but not to destroy its equilibrium. It seems to me that every live teacher would emphasize subjects illustrated under his window, so to speak, but I would not carry it to the extent of not giving a fairly complete treatment of the whole subject. It seems to me that the various schools to which our scholars go are asking for just those subjects that will best fit the scholar for the course selected. When other schools, as, perhaps, trade schools, are organized, bookkeeping, manual training and such courses may be offered for admission. I see no reason for offering them for admission to our collegiate and technical schools.

3. (1) It depends largely upon the class of people in the individual town. With the introduction of a commercial course last fall our entering class increased 60 per cent over any for several years, and 50 per cent of the class elected the commercial branches. In Easthampton I think there is also a need of manual training and technical courses. (2) I think it is an advantage to have the pupils in the different courses associate with each other, and that the public high school of a town should *not* be divided until its enrollment is such that a division would be an advantage if it were all classical or all technical. (3) I think the curriculum should be made to meet the needs of the community, varying from the straight English and classical courses to the giving of the first place to the technical. The individual subject may well be strengthened where local conditions are favorable. (4) I do not know. I hope to a greater extent than they are now.

A most interesting and suggestive move has been made by the town of Petersham, situated between Barre and Athol. With the aid of private funds an agricultural high school has been established. An interesting account of this school is given in "The People" of March-May, 1907, from which the following extract is taken: —

The town of Petersham has recently been brought into prominence from the fact that it is the first town of Massachusetts, and, as is claimed, the first in New England, to establish an agricultural high school. This important action has been made possible by several favorable conditions. A beautiful and commodious school building was erected in 1906, with ample school grounds. This building, with some furnishings, was provided chiefly by the gifts of Francis H. Brooks, James W. Brooks, Charles A. Fobes, William Simes, Edwin C. Dexter, Mr. Waldo, Mrs. Emerton of Salem, J. W. Cooke of Barre. The land, containing about ten acres, was also donated by James W. Brooks. The total cost of the building is not stated, but it probably equals or exceeds \$20,000. The school building is of stone, beautiful in appearance and well arranged, and looks out upon some of the best scenery of New England. Another favorable condition is the school legislation, recently enacted in Massachusetts to encourage small town high schools somewhat remote from high school centers. Still further, the general movement towards better treatment of industrial education is promotive of more attention to agriculture, trades, home arts and other forms of training, which are of great value, but which have for various reasons been much neglected or ignored in the public school system. The favorable co-operation of the school authorities may also be noted.

These local and general conditions, which reflect honor on the town, the individual donors to the school enterprise, and indicate a wise readjustment of public education in rural as well as urban districts, have contributed to this important result,—the establishment of the Petersham Agricultural High School. The courses of study at the Petersham High School are two, the college preparatory and the academic. The agricultural studies are arranged chiefly under the latter course. It should be stated that, in addition to studies which have a bearing on agriculture (horticulture, forestry, etc.), good provision is made for other important school studies in language, mathematics, history, etc. The following statement as to the scope of agricultural instruction is put in popular form in the report of the current year, 1906-07:—

*What the Course in Agriculture will teach.*

1. The wild flowers, birds, animals and their habits.
2. The rocks, their chemical composition, and the process by which the earth has been changed from a molten mass to a fit home for man.
3. Kinds of soil, their physical and chemical properties, the crops best suited to each, and the proper methods of improving, cultivating and fertilizing them.
4. How to raise the best hay crop, and the culture of each of the standard crops grown on a farm.
5. How to raise, care for and market both the large and small fruits.
6. How to conduct a market-garden business both in the open and under glass.



7. The noxious representatives of the insect world, harmful fungi and the methods of destroying them.

8. The principles of forestry and landscape gardening.

9. How to care for domestic animals, poultry and bees.

10. How to manage the dairy and culinary departments.

11. How to use the saw, plane, chisel, and keep tools in good order.

12. The cost, description and practicability of the most modern machinery in each kind of farm work.

To present the studies bearing on the subject of agriculture in another way, the following items are noted:—

Agriculture, . . . . .	3 periods per week for 4 years.
Elementary physics, . . . . .	3 periods per week for 28 weeks.
Advanced physics, . . . . .	2 periods per week for 24 weeks.
Elementary chemistry, . . . . .	3 periods per week for 12 weeks.
Chemistry (laboratory), . . . . .	2 periods per week for 24 weeks.
Botany, . . . . .	3 periods per week for 24 weeks.
Zoölogy, . . . . .	3 periods per week for 12 weeks.

Domestic science may be substituted for agriculture for three years and floriculture for one year.

The following summary of time allotments of studies is given for the four years' courses:—

*Summary.*

	No. of periods.
Agriculture, . . . . .	480
Floriculture, . . . . .	96
Botany, . . . . .	72
Physiology, . . . . .	48
Zoölogy, . . . . .	36
Physics, . . . . .	168
Chemistry, . . . . .	84
Physical geography, . . . . .	96
Astronomy, . . . . .	64
Domestic science, . . . . .	224
English, . . . . .	416
French, . . . . .	480
Latin, . . . . .	640
Algebra, . . . . .	208
Geometry, . . . . .	214
Trigonometry, . . . . .	96
History, . . . . .	204
Civil government, . . . . .	72
Music, . . . . .	160
Drawing, . . . . .	160
Speaking, . . . . .	40
Spelling, . . . . .	160

The total number of persons in the town between five and fifteen years of age is 139; of these, 63 are boys and 76 are girls. The high

school pupils and the grammar grades are housed in a high school building which permits of an economical use of the teaching force. The teachers of the current year are Edwin H. Scott, Rindge Manual Training School, Cambridge, and Massachusetts State Agricultural College; Miss Bessie N. Hunt, Wellesley College; Miss Cara F. Dillingham, Holyoke College; Miss Jennie M. Powell, Lowell State Normal School; Miss Elizabeth C. Pipping, Framingham State Normal School. The superintendent of schools is A. O. Tower. The school committee is as follows: Charles M. Gay, Preston R. Crowell, Adelaide Wilder.

The first year of the new school enterprise closes in June. The reports of the work done and the spirit of the school, the attitude of the school committee and of the community toward the work are encouraging. The early years of such an enterprise will of necessity be to some extent experimental and subject to readjustments. The work at Petersham will be followed with interest by many other towns and sections of New England. The success of one town may encourage other towns to take up similar lines of effort. The extension of adaptive agricultural instruction, if we may judge from indications, is likely to come in many communities in the near future. The State policy favors such extension, and during the present year a summer school for teachers opens at the State college to train public school teachers to conduct agricultural studies or school gardens and related studies.

### *Group III.*

Group III. shows a great variety of procedure. In some cases manual training is emphasized and in other instances commercial studies. Again, schools appear to be in a static condition. There would appear to be need of direction and control of the policy of these schools, as time and energy may be wasted in rash experiments. Often a strong personality on the local school board determines the trend of change, and such leadership may woefully lack a clear sense of proportion. The academies, like those in Group II., are averse to any decided innovation. College requirements do not seem to be a source of difficulty for the teachers of this group. A selection from the replies is given.

## Group III.

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
A, . .	74	96	170	2	5	7	An efficient plant for shop work would help. We have optional afternoon classes in chemistry and physics.
B, . .	61	109	171	1	6	7	Our school meets the needs in its field by laying stress upon the technical and business courses, but we have not been able to complete our equipment yet. (Thayer Academy provides this town with excellent college preparatory courses, so this school can specialize.)
C, . .	79	93	172	2	7	9	Manual training to be introduced. Domestic science ought to follow. Should have evening trade school and lectures.
D, . .	-	-	109	1	3	4	Another teacher needed; demand for commercial work. Drop Greek, limit Latin to college preparation, make science practical (recommendations).
E, . .	73	108	181	2	5	7	"The addition of manual training and domestic science courses to those now offered. A second year of both chemistry and physics in the form of applied science; botany and zoölogy from the standpoint of horticulture and entomology."
F, . .	86	100	186	1	6	7	Cannot afford manual training and domestic science. Demand is for graduates who can <i>do</i> something to earn money. Value of high school education not understood. "If several towns could combine, under direction of the State, like the district superintendency, and maintain a vocational school, it might give one solution.
G, . .	32	49	81	1	4	5	Commercial work introduced. Expense of more courses too great, and State co-operation or union with other places needed by such towns.
H, . .	70	84	154	2	5	7	"Already have enough on our hands." General not special work should be attempted in small schools; preparation for the special schools.
I, . .	69	101	170	1	6	7	Adequate building needed. "In my judgment, by better supervision, higher standards, co-operation of parents with teachers, demand by all concerned for brain power and character, and as rapidly as possible providing for manual training and domestic courses."
J, . .	87	113	200	3	4	7	Favor dropping Greek, relegated to college. Introduce "strong business and manual training courses for boys and domestic science courses for girls; also strengthen civic, science and citizenship instruction, with continual regard for the average pupil's probable life work, whether looking forward to industries or to collegiate training."

*Group III. — Concluded.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
K, . .	92	112	204	2	6	8	Have a business department. Residence community, work should be general and fundamental rather than calculated to meet definite local conditions. General course in domestic science for girls, and for boys such manual training as is likely to be of service in almost any trade or of value as a matter of training.

Letters which discuss the points raised in the circular present the following statements and suggestions:—

1. (1) Considerable commercial training can be included in the curriculum of all high schools, except the very small ones. Considerable technical instruction can be included in the instruction in the sciences. My personal opinion of manual training is that it is of little value, except where shops of more or less efficiency can be maintained. (2) Except in the large cities, I do not believe in distinct and separate high schools. (3) It seems to me that it is the duty of a high school to adapt itself to local needs. This is comparatively easy in towns where the industries are mainly in a single line. In our town we are able to adapt our sciences and mathematics to local needs. (4) I do not see the need of recognition by colleges of the so-called practical subjects. As I understand it, the present agitation along these lines is not for the benefit of the college man or woman, but for those who have no ambition in that direction, or are not fitted for college work. It seems that we would do well to keep colleges and their requirements about as they are now. We do not need educated workmen nearly so much as we need those who are interested and proficient in their work.

2. (1) Commercial studies may well be introduced as appropriations may allow, and given their place in the list of electives. Mechanical drawing may have a similar place. These studies should be open to all who have reached the proper stage in their work and who are pursuing the minimum requirement in the so-called cultural studies. Prepared exercises in these subjects should be given the same credit as prepared exercises in any other subject. Unprepared exercises should be given half credit. (2) Inasmuch as one of the chief values of the high school lies in the bringing together of the children of different classes, nothing should be done to interfere unnecessarily with this object. So far as possible college preparatory pupils should work side by side with commercial and manual training pupils. Leaving out of

the consideration the financial question, and looking at the matter merely with a view to the best results educationally, I would recommend for the large cities several mixed high schools, rather than separate schools for different courses. (3) Such a modification as is suggested in question 3 is certainly in the line of educational growth, both in the matter of subjects and of treatment. School boards should seek to have the various industries lend their interest and practical knowledge to the enriching of the high school course. (4) It should not be difficult to get recognition of the so-called practical subjects from those colleges that are confronted by the problem of a decreasing enrollment. This would probably start a movement away from the more conservative institutions, that are now seeking to keep down their enrollment; gradually the latter would come into line. Unless such recognition is first secured from some of the influential colleges, private schools will flourish, without adequate reason, within the province of the public high school. We may hope that the time is not far distant when many of the higher institutions will cease to demand the present subject requirement for admission, and will take, *on trial*, candidates who have covered such a minimum as may logically be a part of every secondary course.

3. I submit below my views upon the topics suggested. I have given my conclusions with very little of the argument by which I arrive at them.

*As to Curriculum and Method.*—The law requires us to prepare pupils for colleges, technical schools and colleges for teachers (normal schools). After our curriculum is made out with this in view, and our program made out with a time assignment equal to meet the requirements, one of the high schools, with three teachers, and the other high school, with four teachers, have very little time and little energy for that which makes up the balance of our curriculum. This is wrong and it is right; wrong for the many, and right and legal for the few. The many should have justice done to their needs; the few must be taken care of. This problem cannot be solved under the present plan of organization.

*As to Practical Subjects.*—The practical subjects should receive (if that can be possible) equal recognition, should be given equal time and should receive equal credit.

*As to Electives.*—I prefer a scheme which groups studies together, and allows a maximum of electives in these groups.

*As to Consolidation of High Schools.*—However advisable it may be, I am afraid it is not practicable. For academic reasons it is advisable; for social reasons it is not.

*As to Division of Labor.*—Any division of labor which involves movement of pupils is not advisable except in the environments of a large city or town. A division which involves movement of teachers

might be worked out in special subjects, just as it now is in music and drawing.

4. (1) Such college preparatory and general courses as are to be found in all well-established high schools; commercial courses, including bookkeeping, commercial arithmetic, business practice and forms, commercial geography, commercial law, typewriting and stenography; manual training, including mechanical drawing, on the same basis as the commercial course, covering bench work in wood, forge and lathe work in metal from plans made by the pupil; making of working drawings or plans from objects; all work to be on objects of practical value. (2) Not desirable in the smaller towns except where new buildings are needed for present conditions. Even then I should prefer to make them departments of the established high schools. (3) Courses should meet the local needs as far as possible. Where opportunity is offered for practical training outside of the school it should be made the most of. (4) This question can be better answered by the colleges.

5. (1) Sufficient work in the cultural and informational studies should be required to give the pupil a good general fund of information and the needed culture; and there should be offered certain elective privileges in some lines of the commercial, manual training and domestic science work, as shall best fit the needs of the children in that particular community. Provision should be made for all the children so far as can be done, and those elements of the vocational or practical subjects should be given as will best meet the needs of the children in the special community in which the child lives. Locality must control and govern this latter selection to a considerable extent. (2) I do not think it desirable that distinct high schools of commerce, manual training, agriculture and domestic science should exist as such, generally speaking. A broad cultural and informational course should be provided for all pupils of high school age, and certain elective privileges in lines of commercial work, manual training, etc., should be granted. Pupils of high school age ought not to be permitted to pursue a course which is purely "vocational" in its aim. That need had better be provided for in separate schools, such as trades schools, if it shall seem advisable for the State to undertake such training. I heartily sympathize with the modern demand for the instruction of the "more practical," its introduction into the general school curriculum, but we must not forget the actual need of a certain amount of information and culture on the part of the children. I believe the object of the introduction of the "more practical" subjects into the high school should be rather for the purpose of "self-realization" on the part of the pupils, and for the guidance on the part of the teacher, than for purely "vocational ends." High school work ought to have what Professor Hanus calls the "vocational squint," but the high school ought not to be a "vocational school," *per se*. (3) Such adjustment is very desira-

ble. (Such as mentioned in your illustration.) The adjustment should be made in such a way as not to overlook the needs of giving information in all parts of the subject, to some extent. Some specialization is well, but caution is needed in applying it. Agriculture might well form an important branch of study in some schools, but it ought not to be pushed to such an extent as to neglect the possibilities of and needs of those children who are not to be agriculturists, but whose tastes run in other lines. Specialization is the function of the agricultural college or the trades school, and not of the high school. (4) I do not feel qualified to comment on the fourth question at the present time.

6. It occurs to me that it may be well to add a few comments upon the separate topics noted in your circular. I have a very distinct feeling that special high schools are not altogether desirable. It ought to be possible to offer in every high school courses in commerce, manual training and domestic science and other technical instruction under circumstances which would not encourage the student to neglect other lines of study which are, after all, important. In providing for the subjects noted, the wisdom of giving special emphasis to those topics in which the community is specially interested, or for which it may afford exceptional facilities, seems obvious. It is, of course, understood that in making this statement I could not be in favor of restricting the work in physics, for example, but simply for placing special emphasis on lines where it would seem to give the best results.

#### *Group IV.*

Nineteen high schools out of a total of 25 furnished information on the status of schools of from 250 to 500 pupils. There is agreement on the general high school, with provision for competent instruction in manual training, business studies and domestic science, as the one adapted to meet community needs. Yet such courses are not thus far largely introduced. College demands are viewed with much seriousness. Sometimes this feeling expresses itself in a protest against the limitations put on the school by entrance requirements, and again there is anxiety lest the college-preparatory function may be hampered by the new subjects. There does not appear to be as keen a sense of responsibility to meet local conditions as is shown in the smaller schools. The replies come from rural, suburban, manufacturing and business communities, and so show a wide range of opinion.

*Group IV.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
A, . .	110	144	254	3	6	9	"When we enter our new building next fall we shall expand our work by adding manual training, a more extensive commercial course, and probably by a course in domestic arts for girls."
B, . .	129	239	368	4	11	15	"I would suggest the introduction of industrial and domestic science courses. More practical work for those not preparing for the professions."
C, . .	161	227	388	3	9	12	Have business course; should like manual training and domestic science. "A good high school like ours does meet local conditions through general development."
D, . .	110	135	245	3	7	10	"First of all by doing its present work well and sensibly, not under too great domination by the colleges. Practical, pleasurable English; an insight into government and governmental policy; science influenced by local conditions, textile, mechanical, agricultural, etc. Manual training to train versatility and usefulness."
E, . .	177	276	453	6	12	18	Suggest manual training and domestic science. Would modify curriculum rather than subjects of the curriculum.
F, . .	143	178	321	4	7	11	"More attention and first-class talent given to these courses, and less domination by the demands of the colleges as to what our courses of study shall be."
G, . .	180	200	380	6	7	13	"We have a two-year business course. I think eventually we should introduce manual training and domestic science."
H, . .	168	191	359	4	10	14	"Not to change our preparatory course (yet it would be advisable for the colleges to recognize the worth of manual training and domestic science), but change our general course to include manual training and domestic science. The business course should be four years, but no intensive work on that as a specialty until the last two years, etc."
I, . .	133	183	316	4	11	15	"There is need of courses in manual training and domestic science. The course in drawing might well be extended. Our business course is meeting the local demands."
J, . .	127	174	301	2	9	11	"We could render a wider service to the community if we could add courses in manual training and domestic science, emphasize to a greater degree the application of drawing to handicraft, and perhaps offer some work looking more directly towards industrial training."

These letters on the general propositions are added to the replies on separate high schools.



1. (1) Where special schools of commerce and manual training do not exist, we advise that commerce and manual training be made an important part of the school curriculum. We do so here. (2) We believe that only large cities should try to support these special schools, unless in towns of 10,000 and over the committees can arrange an evening course. There would be hardly sufficient patronage in a town like this to justify the expenditure for a day school in commerce, etc. (3) We think that every high school should adapt all of its work to local conditions, and take advantage of every local industry for visitation and assistance. We do so here. (4) We would urge that the more practical the requirements for college can be made, the more sensible it would be, and a far greater number of needy students would be able to develop some latent power which a knowledge of classics, English, etc., does not touch. It seems to us that the colleges will have to take the initiative in this matter. We would heartily favor any change that would not only make the requirements for admission to college more practical, but would make the college course itself more practical and sensible.

2. (1) (a) The curriculum of a general high school in communities where special schools of commerce and manual training cannot be supported should contain, besides the academic instruction, instruction in commercial branches and manual training. (b) I should say bookkeeping, stenography, typewriting, commercial law, commercial geography, in the commercial course; and in the manual training course, woodworking, including bench work and wood turning, iron working, including forging, chipping, filing, and turning; mechanical drawing; the domestic arts, including cooking and sewing, the latter to include dressmaking and millinery. (2) I do not think it is desirable at all. I think every high school should have some form of manual training connected with it and also a commercial department. (3) In the particular treatment of individual branches I should say the curriculum might be modified to meet local conditions in a measure, but not the subjects of the curriculum. (4) Only to a small degree.

3. (1) The course of study should be as broad as possible, and as is consistent with thorough work. There should be courses in science, languages, the ancient and the modern, mathematics, English and history. There should certainly be an elective course in business arithmetic, bookkeeping, stenography and typewriting with special training in business English. Pupils who take this series of electives should select cultural studies from the general course. All first-class high schools should have a commercial course. With reference to technical instruction, one cannot be so positive. There should be an extended course in mechanical drawing for pupils who are fitting for technical schools. What other manual training branches are introduced will depend entirely upon the nature of the equipment of the school, and the demands of the community in which it is located. (2) Whether or

not separate and distinct high schools should be maintained depends entirely upon the community itself. Each locality has its own problems. If the community is compact, and there is a large high school enrollment, I would advise that there be separate schools. If the community is scattered, and buildings in different sections will better accommodate the high school population, a single school, which offers general, commercial and manual training courses, should be maintained in each of these localities. I am not in favor of a large high school enrollment in a single building. When a school numbers more than 500 or 600, it becomes unwieldy. The principal, and his assistants as well, lose their personality, and there is not the grip upon the individual that there should be. However, I notice in the last "School Review" that there is an editorial upon the disadvantages arising from maintaining separate schools, and the arguments advanced have considerable weight with me. My main objection to a single school in any large community is as stated above. It seems to me that the present tendency in the large cities is to herd too many children together. (3) I think the suggestion offered can be carried too far. Pupils need a broad outlook in all subjects taken. If, for instance, in physics they receive a thorough training in all of its divisions, they should readily adapt themselves to such conditions as present themselves in any of the establishments such as you mention. Instruction should certainly be practical, but not too narrow. Many business men prefer the young man who has had a broad, general training to one who has had a commercial training only. The same preference is expressed by managers of manufacturing establishments. (4) If these practical subjects are in line with what the student is to pursue in the higher institutions, and they train him so that he can carry on successfully the various courses offered by such institutions, these practical subjects should receive recognition. I am afraid that the tendency will be to carry such demands farther than is wise for the best interests of the pupils.

#### *Group V.*

The cities and towns included under Group V. show a distinct tendency towards special high schools. But the practice of the schools in this respect is by no means uniform. Neither is there any well-defined policy on the part of the State. Boston, Cambridge and Springfield have high schools of manual training. The technical high school of Springfield has organized courses in domestic science and commercial studies, so that all subjects of a vocational nature are grouped in one institution. Newton is about to start a technical high school. Boston has a high school of commerce and also a school of

practical arts for girls. Holyoke, Brockton, Lowell, New Bedford, Fall River, Lawrence, Lynn, Medford, Somerville, Quincy and Worcester do not as yet provide special high schools, but incorporate courses along practical lines in the general secondary schools. There is also to be found an alignment on the basis of classical and English branches, a long-standing distinction. College preparatory work is given a large place, and is usually the test whereby the excellence of the school is determined. So Group V. may be regarded as a field of extensive experimentation, with a decided trend in the direction of industrial courses. It is also clear that the views of superintendents and the character of the community life are potent influences in deciding the high school policy. Not as yet have we attained to a general agreement on the definition of a modern high school. The replies from this group, as representing the judgment of men of wide outlook and large experience, are especially worthy of consideration.

*Group V.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
A, . . .	197	356	553	6	20	26	"We need equipment for manual training and domestic science as a part of our regular curriculum. It would be elective, as commercial branches, which are elaborately taught in our school." "By adding industrial courses fundamental to shoe machinery manufacturing and to shoe manufacturing and to domestic science. We are fairly well equipped for biology, botany and school gardening."
B, . . .	252	248	500	10	17	27	The "variety in the subject-matter in any given year (in their course) seems too great; it tends to diffuseness." "By giving courses designed to promote efficiency in the lines into which the pupils of that community will probably go, regardless of whether the course has ever been tried elsewhere or not. Also by modifying existing and traditional courses in a way to meet local needs."
C, . . .	247	342	589	5	15	20	"The high school should be vocational as well as cultural in its aim. The character of the industries of any city should largely determine the kind of technical work of the high school."

*Group V. — Concluded.*

SCHOOL.	Boys.	Girls.	Total.	TEACHERS.			Changes suggested, and how to meet local needs.
				Men.	Women.	Total.	
D, . .	297	337	634	10	15	25	"My idea is that the manual training and business courses should be as strong as any others, college or technical. Country high schools should make more of agriculture and forestry than of a business course."
E, . .	327	377	704	10	19	29	"I would stick to the college preparatory and magnify this course. But would have business, domestic science and manual training courses for better individual adaptation." "Too great an effort to be 'like the city' is narrowing. We need broadly educated men and women."
F, . .	278	290	568	7	12	19	"It is a serious problem for purely residential cities. What are their local needs? The parents are engaged in commercial, manufacturing and professional lines elsewhere, and their home city is merely a bedroom." All courses should be extended, each subject given six hours weekly.
G, . .	376	408	784	8	16	24	"The school possesses a very good equipment for commercial work and offers a strong course. Domestic science will be offered next term and manual training next September. This school should be influenced by the presence of the Fore River shipyard and the granite quarries, our two chief industries."

1. (1) Where there are no special schools of commerce and manual training the high school should support commercial and manual training departments. Manual training should include domestic science for the girls, and manual training for the boys. In the latter course, the boys should be allowed to specialize at the end of the second year. This would give them a technical training similar to that which is given in the Stuyvesant and other New York City high schools. (2) Where the expense of separate schools could be comfortably met by the community, distinctly vocational schools would prove more efficient. Where such separate schools cannot be maintained, manual training, domestic science and the commercial branches should be taught as fully as possible in the high school. (3) I believe that any local high school may, and should, modify its courses to meet the local conditions. In the technical work local industries must be taken into account in order to secure the greatest efficiency in vocational training. (4) I don't know. The colleges will do just as they please, with little regard to the desires of the schools or the change in educational courses and methods.

2. Perhaps I may amplify the statements I made upon the blank by saying that a school which is in a shoe town, for example, Lynn, may

very profitably devote some of its time in manual training and business practice to the actual making of shoes and work in leather. In business practice they may profitably conduct (on paper) a shoe business. In a strictly farming community the manual training and business practice might be varied to conform to agricultural needs and terms. In a cotton fabric community, like Lowell, the chemistry in the high school should certainly deal with the elements of dyeing, and the manual training should somewhere deal with spinning and weaving. In the making up of any course of study it seems to me that a certain amount of time may be allowed each year for the subject entitled manual training. The subject-matter of this manual training may be varied in kind from year to year. It may be flexible in kind and amount. The same is true of the group of studies which we designate business practice.

3. The curriculum of a general high school in communities supporting no special schools should contain a commercial course, manual training course, domestic science course, and an increasing amount of industrial training. When it becomes necessary for a community to establish a second high school, I believe that school should be devoted to commercial work, domestic science, manual training, and kindred matters. The curriculum of the high school should be adjusted with careful reference to local conditions and needs. Quincy's two great industries are the Fore River ship-building yards and the granite works. The curriculum, then, of the Quincy high school should be influenced quite largely by this fact. I believe that so-called practical subjects should be recognized in the requirements for admission to college. Often a boy, after doing a year or two of work along these lines, changes his mind and enters a college preparatory course. At present, this means that he must begin all over again. If his previous work has been of good quality, it should be recognized, in justice to the subject and in justice to the student.

4. (1) I feel that the course of study in use in this school (English high) satisfies as nearly as possible the requirements of a general high school. We recognize in our commercial department the question of the fitness on the pupil's part of doing *practical* work after graduation, coupling with it a thorough, all-round training as an accompaniment. In manual training we recognize the educational value of training the hand to do an assigned task, rather than the practical value of preparation for a trade. (2) Such schools should be maintained separately only when a general training along broad lines can be given with the technical training. If this cannot be done the name "high school" is a misnomer. (3) It seems to me very desirable to take advantage of local conditions and advantages. (4) The meaning of this question is not clear to me. Recognition of the so-called practical subjects in college requirements depends on the whim or decision of the college. If your question concerns the *desirability* of such recognition, my answer is a doubtful one. If the college is willing to adjust its work to

the varied preparation of its candidates for admission, so that justice will be done to all, I should favor a limited leeway in the substitution of certain practical subjects in the entrance requirements.

#### GENERAL CONCLUSION.

Such a survey of the high schools of the State warrants certain generalizations.

1. It is clear that the interest in the so-called practical subjects, manual training, domestic science and commercial studies, is widespread and strong. This attitude of school men results, in part, from the desire to emulate and imitate communities where such subjects are now recognized; from the influence of the State authorities in emphasizing the needs of the schools on modern lines; and, more than all else, from the conviction of teachers and men of affairs that the high school curriculum as at present organized and operated is not reaching in a direct vital way many young people, particularly in smaller towns and cities.

2. With few exceptions, the schools which cherish these worthy ambitions are not provided with teachers, in number or ability, or with equipment in buildings, laboratories and apparatus, necessary for extending courses or teaching effectively the subjects already in the curriculum. Beyond question many schools are undertaking programs beyond their power.

3. Under such conditions there is grave danger of a chaotic state in the public secondary schools of Massachusetts, as the result of ill-advised attempts at broadening the courses of instruction.

4. An additional embarrassment arises from the urgency on many schools to meet college demands. Local pride and the standard imposed by the State as necessary for recognition as a high school accentuate this difficulty. A serious conflict between college preparatory work and the practical branches is inevitable unless some common ground is found by college and school.

5. Such a situation calls for earnest thoughtful study by the State Board of Education, by the leaders in our educational system and by school boards, and the clearest thinkers of our communities.

It would appear that the time is ripe for a definite leadership by the central authority of the Massachusetts school system, to the end of shaping and influencing the trend and policy of the local high school more directly than has been the case in the past. Fortunately, the delightful but dangerous complacency and self-satisfaction in our scheme of public instruction is passing. Let us beware, and be guarded against rash experiment and ill-considered changes in an organization so easily demoralized as the public school.

#### A FEW SUGGESTIONS.

While the function of the committee may be considered as limited to a study of actual conditions in our own high schools, some suggestions are made as to a solution of the existing difficulties.

1. With the needs and capacities of the smaller high schools in mind, a kernel or core of academic studies should be determined on as a common basis for instruction. This would constitute a norm or standard for the public secondary school. It is unfortunate that so many schools try to carry out elaborate and multifold courses. Institutions with two or three teachers, and an income of \$1,500 to \$2,000, offer more courses than does Springfield, with a staff of thirty instructors. After all is said, the elements of a thorough high school course are not numerous. Academic training and culture can be secured through the thorough teaching of English, one or two foreign languages, physics (general), chemistry, algebra and geometry (presented with a view to their practical application, and not as pure mathematics), and English and American history. Above all else, the schools should, by physical training and directed games and sports, inculcate care and respect for the body, a moral aspect of education woefully neglected, particularly in our smaller communities. The sense of beauty and rhythm must be reached through a music and art study. Around this central body of instruction let there be grouped electives, determined by the capacity of the teaching force, the equipment and local conditions.

2. A careful study should be made of ways whereby the school subjects may be so presented as to bear on local indus-

tries and aid the community life. The sciences and history are especially capable of such modification. Botany in the small town can use a wealth of material ready at hand, and emphasis can be laid on the practical knowledge of plant life, so important to the farmer. Physics should be intimately related to the application of science in the home and industry. Prof. W. R. Hart of the Massachusetts Agricultural College has made a special study of the teaching of science in the smaller schools, and his report is given in connection with this main statement of the committee. The bearing of such changes on the present movement for vocational training is easily seen, but that field is too extensive for the committee to enter.

#### A QUESTION OF ADMINISTRATION.

Yet even with the best adjustment of courses and methods, it is difficult to see how, under present conditions of organization and financial support, the large majority of high schools in the State can meet the demands of modern life, business, domestic and industrial. State aid must be given in greater amount. But the expense of equipping every high school for practical courses, with a view to vocational training, is practically prohibitory. Furthermore, such a scheme would be wasteful, in that many schools in the three lower groups could not provide pupils to occupy the time of the special teachers. Duplication of equipment is also expensive, to the point of extravagance. Several solutions are here presented, but with no recommendation.

*First.* — Several high schools in a district might be combined. In the west this is done by the organization of a county high school. Against this proposition there may be rightly argued the value of the local high school as a social center.

*Second.* — Of the high schools in adjoining towns, each may specialize, and the pupils of the district elect among the several schools, as interest in language, manual training, domestic science, business courses and agriculture shall direct. Good roads and the trolley service are making practicable such a system of consolidation or co-operation.

*Third.* — Special teachers in practical subjects might be



assigned to a district, and these go from school to school, much as instructors in drawing and music do now. Traveling laboratories and apparatus would naturally become part of such a scheme.

It is a satisfaction to turn from these vague possibilities to speak of things done under present conditions by intelligent leadership, backed by community spirit and private financial support.

The agricultural high school at Petersham has proven its value for a rural district. Yarmouthport, through the interest and money aid of a friend, maintains good courses in practical subjects. Fairhaven has not only a magnificent building, the gift of H. H. Rogers, but it also is able to offer a rich course of study, with attention given to physical training, shop work, domestic science and business subjects. At Deerfield, Dickinson Academy has become a power in the town by reason of the personal influence, skill and enthusiasm of the principal. The enrollment is practically 100 per cent. of the high school population. Northampton is soon to establish an industrial school, to supplement the work of the high school in that city and in neighboring towns.

Such examples show that the high school as a factor in the social and economic life of the village town and small city has not yet realized its influence and usefulness. Bound as school men and schools are by the traditions of academy and preparatory school, and dominated by the college entrance demands, both in subjects and method of presentation, there has been no general, concerted and whole-hearted movement by high school teachers to provide the training, discipline and culture which the communities are half consciously demanding. These needs must be interpreted, recognized and supplied until the high school takes its right place as a local institution. As such it will give large importance to general training and provide for an introduction, at least, to the useful callings of actual life.

To inspire, direct and control the high school in this process of evolution and adaptation is a most important task. Legislation and public will surely give necessary power, provide means

and cordially support a comprehensive and intelligent policy of secondary school administration and organization for community needs.

WILLIAM ORR,

*Principal Central High School, Springfield.*

MARY W. WOOLLEY,

*President of Mount Holyoke College, South Hadley.*

PAUL H. HANUS,

*Professor of Education, Harvard University, Cambridge.*

FREDERICK C. FERRY,

*Dean of Williams College, Williamstown.*

W. R. HART,

*Professor of Agricultural Education,  
Massachusetts Agricultural College, Amherst.*

JAMES P. MUNROE,

*Boston, Mass.*

GEORGE P. HITCHCOCK,

*Principal of High School, Brookline.*

C. W. PARMENTER,

*Principal of Mechanic Arts High School, Boston.*

R. O. SMALL,

*Superintendent of Grafton-Upton District, Grafton.*

## SCIENCE TEACHING IN SOME OF THE SMALLER HIGH SCHOOLS OF MASSACHUSETTS.

ABSTRACT OF A REPORT TO THE COUNCIL OF EDUCATION, BOSTON,  
MARCH 14, 1908, BY W. R. HART of AMHERST, MASS.

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This inquiry was made with the view of finding out some of the conditions under which the work in a few of the leading sciences is being done, the methods employed and the attitude of the teachers towards the subjects they are teaching. Questions were sent to none but teachers of science, and the inquiry was confined to high schools having six teachers or less. The inquiry covered but three subjects, — chemistry, physics and botany.

Thirty-four replies were received on botany, 38 on chemistry and 50 on physics.

### PHYSICS.

The following is the list of questions relating to the teaching of physics: —

1. In what year is the subject taught?
2. How many weeks is it taught?
3. How many recitations per week?
4. How many hours spent in the laboratory per week?
5. Is any of the nature work below the high school planned with reference to the work of the physics of the high school?
6. What text-book is in use?
7. In your own experience as a student, what phases of physics appealed to you most?
8. Did your centers of interest undergo any change as you proceeded from high school physics into college physics?
9. Interpreting your own interest as a student in the light of your experience as a teacher, what, if any, modification would you suggest as improvements in physics for high schools?
10. In arranging say 50 experiments for high school work,

would you select apparatus designed to illustrate "principles and laws," or would you select such appliances as are in use in the various mechanical arts?

11. What feature of the work do your pupils most enjoy?
12. What feature is most distasteful?

*Summary of the Answers.*

1. Of the schools tabulated, 11 give physics in the first year, 11 in the second, 18 in the third and 13 in the fourth.

2. Of 47 answers tabulated, physics is given eighteen weeks in 1 school, twenty in 2, twenty-five in 1, thirty in 3, thirty-five in 1, thirty-six in 2, thirty-eight in 4, forty in 30, eighty in 3.

3. Of 49 answers tabulated, the subject is given once a week in 2 schools, twice in 2, three times in 17, four times in 15, five times in 13.

4. As to work in the laboratory, 9 schools report no work, 12 report one hour per week, 11 report two hours, 5 report three, and 10 report four.

5. Six schools make some effort to relate the nature work in the grades to the physics of the high school; 27 do not.

6. Texts in use are Gage, Hall and Bergen, Avery, Coleman, Higgins, Hoadly, Wentworth and Hill, Carhart, Chute and Steele, Williams and Gale.

7. The seventh question was answered by 25 teachers. The majority of their answers may be summed up under the words "descriptive," "experiments," "mechanics," "practical applications."

8. Answers to question 8 indicated a pronounced change of attitude of mind towards the subject during college life. Quantitative and mathematical considerations predominate.

9. Practically all of the answers to the ninth question favor "less mathematics," "more practical applications," "some practical discovery," "less theory."

10. In answering question 10, 10 teachers would be guided in the selection of apparatus by the principle or law to be illustrated, 11 would be guided by mechanical appliances in common use and 13 by a combination of the two.

11 and 12. The answers to these two questions correspond

in a marked degree to those given by the teachers expressing their own attitudes towards the subject while they were in the secondary school.

#### CHEMISTRY.

The following is the list of questions relating to the teaching of chemistry:—

1. In what year is it taught?
2. How many weeks is it taught?
3. How many recitations per week?
4. How many hours spent in the laboratory per week?
5. Is any of the nature work of the lower grades planned with reference to the work in chemistry in the high school?
6. What text-book is used?
7. In your preparatory school, what phases of chemistry appealed to you most?
8. What appealed to you least?
9. In what respects, if at all, was your attitude towards the subject changed while in college?
10. In what respects has your experience as a teacher modified your attitude while a student?
11. If you felt free to choose, in the light of your experience as a student and as a teacher, assuming that 50 per cent., more or less, of your students will pursue the subject no further than you take them, which would you choose, experiments illustrating chemical laws, or experiments relating to the making of soap, soda, glass, dyes, steel, paper, butter, cheese, fertilizers, disinfectants, and the like?
12. What modification of the work as now given would in your opinion add interest to the subject?

#### *Summary of the Answers.*

1. Seven schools give chemistry in the first year, 9 in the second year, 10 in the third year, 20 in the fourth year.

2. In answer to question number 2, 5 schools offer thirty-eight weeks, 21 schools offer forty weeks and 7 schools offer fifty weeks or over.

3. The number of recitations per week varied from one to five, 1 school having one recitation, 2 having two, 10 having three, 11 having four and 8 having five.

4. In regard to laboratory work, 14 schools reported two hours per week or less, 4 reported three hours and 9 schools reported four hours per week.

5. Two schools reported some effort to relate the nature work in the lower grades to the chemistry of the high school; 29 reported no such effort.

6. The texts reported are Williams, Avery, Peters, Remsen, Storer and Lindsey, Steele, Hesler and Smith, Mead, Knott, Newell, Higgins.

7. So few answers were given to the seventh question that they are here submitted without comment: "No interest in the subject," "laboratory work in practical problems," "such phases as an educated person ought to know," "practical everyday problems," "common gases," "work on metals," "scientific view of substances as contrasted with the popular," "principles underlying experiments."

8. The phases of the subject most distasteful were theory, formulæ, equations, examples, analytical, and details.

9. Many who answered the ninth question could not recall any change of attitude towards the subject. Those who experienced a change found that "interest in theory developed," "more interest in the theory of things," "qualitative," "organic unity of nature as demonstrated by change of substances, periodic law, serial compounds and so forth," "enjoyment of the mathematics of chemistry," were the interesting features of the subject.

10. All who confessed to having experienced any change of attitude on the subject since becoming teachers were substantially agreed upon "more practical and less of theory."

11. The answers to question 11 fall into three groups: 1 favored pure chemistry, 17 favored applied chemistry and 12 favored a combination of the two.

12. The answers to the twelfth question fall into the following groups:—

No change, 1.

Applied chemistry in illustration of laws, 1.

Chemical laws first, then practical applications, 3.

More laboratory work, 5.

Experiments pertaining to every-day life, 18.

## BOTANY.

The following is the list of questions on botany:—

1. In what year is it taught?
2. How many weeks is it taught?
3. How many recitations per week?
4. How many hours spent in the laboratory per week?
5. Is the nature work of the lower grades planned with reference to the botany work of the high school?
6. What text-book is used?
7. In your preparatory school what phase of botany appealed to your interest most strongly?
8. What phase appealed to you least?
9. In what respect, if any, was this attitude changed by your college work in botany?
10. Has your experience as a teacher modified or confirmed your attitude while a student?
11. For high school pupils, would you recommend the cursory study of many plants (100 or more)? Or the detailed study of a few (15 to 20)?
12. What use do you make of the school garden in the study of botany?
13. In case you have no garden, what use could be made of it, if one were available?
14. If you had perfect liberty in choosing, would you select plants for study on account of their scientific value, *i.e.*, their place in a scheme of classification, or on account of their commercial value?

*Summary of the Answers.*

1. Four schools give botany in the first year, 14 in the second, 9 in the third and 4 in the fourth.
2. The number of weeks devoted to the subject varies from twelve to forty, distributed as follows: 1 school giving twelve weeks, 1 giving thirteen, 2 giving eighteen, 2 giving nineteen, 15 giving twenty, 1 giving twenty-five, 1 giving thirty and 3 giving forty.
3. The number of recitations per week varied from two to five. Six schools reported two, 7 reported three, 6 reported four and 3 schools reported five per week.

4. In regard to laboratory work, 8 schools reported no laboratory work, 6 reported one hour per week and 9 reported two hours per week.

5. Two reports indicate some effort to relate the nature work in the grades to botany of the high school; 17 make no such effort.

6. The texts in use are Spaulding-Bergen, Bergen's Foundations, Leavitt's Outlines, Bergen and Gray, Hunter's Elements, Wood's High School Leaflets, Bailey, Gray.

7. During high school work some of those who answered said their interest was in "ecology," "experiments," "analysis," "structure and description," "life processes," "study of growth from life," "evolution of form," "relations of plant life," "how they grow," "the plant as a machine," "germination."

8. The distasteful aspects were "analysis," "pressing and mounting," "definitions," "classifications."

9. As college students they became interested in "analysis," "dynamic relations," "various phases of propagation," "environment upon form," "underlying principles of plant life," "structural botany," "the plant as a representative of life."

10. In answer to question 11, 7 teachers would lay stress on the study of many plants, while 17 would emphasize the detailed study of a few.

12. The school garden as a factor in the study of botany in the high school has as yet scarcely made itself felt.

14. In the selection of plants, 4 would be governed by the scientific value of the plant, 8 by the commercial value and 15 by both considerations combined. A few answers will indicate the tendency of opinion: "First, emphasis should be on the work of the plant in nature. Then consider structure as correlated with function. Then classification, — not finer than orders. Detailed classification of flowering plant relegated to the rubbish heap. The important factor is dynamic relations." "Mixture of both, but a decided predominance of the latter." "Common plants, but with some attention to classification." "Should take types of common interest; should tend towards a scheme of classification. Should use the school garden on the basis of commercial value."



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# AN ABSTRACT

OF THE

SCHOOL RETURNS MADE BY THE SCHOOL COMMITTEES  
OF THE SEVERAL TOWNS AND CITIES IN  
THE COMMONWEALTH

FOR

THE SCHOOL YEAR, 1906-1907.

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## BOARD OF EDUCATION.

## BARNSTABLE COUNTY.

TOWNS AND CITIES.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.							
	No. of persons in towns between 5 and 15 years of age.	No. of persons in towns between 7 and 14 years of age.	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average membership.	No. graduated from grammar schools.
Barnstable, . . . . .	4,336	453	763	—	133	490	713	660	.93	52
Bourne, . . . . .	1,786	197	326	—	59	216	292	270	.93	26
Brewster, . . . . .	739	80	105	—	16	69	99	92	.93	11
Chatham, . . . . .	1,634	189	285	5	45	189	236	216	.91	37
Dennis, . . . . .	1,998	210	361	—	51	235	328	310	.94	31
Eastham, . . . . .	519	60	68	—	—	55	66	60	.91	3
Falmouth, . . . . .	3,241	382	590	28	63	387	533	457	.86	20
Harwich, . . . . .	2,291	278	406	—	37	312	354	319	.90	14
Mashpee, . . . . .	317	374	50	—	3	30	52	48	.92	4
Orleans, . . . . .	1,052	143	199	—	28	143	176	162	.92	10
Provincetown, . . . . .	4,362	704	995	—	78	675	926	882	.95	29
Sandwich, . . . . .	1,433	148	236	—	36	156	225	211	.94	18
Truro, . . . . .	743	111	160	—	7	115	136	126	.93	5
Wellfleet, . . . . .	958	92	152	—	14	100	130	116	.89	13
Yarmouth, . . . . .	1,422	140	207	—	31	126	191	178	.93	10
Totals, . . . . .	26,831	3,223	4,903	33	601	3,298	4,457	4,107	.92	283

# SCHOOL RETURNS.

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## BERKSHIRE COUNTY.

Adams, . . .	12,486	\$5,863,338	43	2,350	1,874	1,924	27	133	1,331	1,678	1,595	.95	90
Alford, . . .	275	157,921	2	43	28	50	-	-	28	37	31	.85	-
Becket, . . .	890	465,667	7	241	134	182	1	1	129	135	122	.90	9
Cheshire, . . .	1,281	696,066	7	299	188	233	-	4	188	203	189	.93	9
Clarksburg, . . .	1,200	255,293	6	279	230	273	2	5	183	198	179	.91	5
Dalton, . . .	3,122	3,197,716	17	600	485	631	-	41	452	571	535	.94	35
Egremont, . . .	721	439,085	4	84	74	99	4	4	74	80	72	.90	2
Florida, . . .	424	155,167	5	91	56	82	-	4	62	66	62	.93	4
Great Barrington, . . .	6,152	5,342,530	28	999	736	1,179	7	203	741	1,084	1,003	.92	63
Hancock, . . .	434	282,585	6	82	64	85	2	4	63	78	65	.83	2
Hinsdale, . . .	1,452	591,039	9	251	198	268	4	1	198	237	214	.90	12
Lanesborough, . . .	845	484,384	5	128	102	130	1	4	92	104	91	.88	-
Lee, . . .	3,972	1,977,739	14	735	538	643	-	112	435	594	546	.90	21
Lenox, . . .	3,058	4,970,230	20	564	403	688	4	73	611	618	559	.90	11
Monterey, . . .	444	290,099	4	75	59	89	2	4	73	71	62	.87	-
Mount Washington, . . .	87	82,012	2	11	11	22	-	4	14	18	17	.91	1
New Ashford, . . .	100	52,315	1	13	11	13	-	-	11	9	8	.89	-
New Marlborough, . . .	1,209	609,460	11	213	147	224	6	10	160	182	161	.88	8
North Adams, . . .	22,150	14,662,159	80	4,326	2,925	3,380	293	313	2,109	3,022	2,798	.93	131
Otis, . . .	534	229,158	6	75	61	87	2	-	72	69	61	.88	-
Peru, . . .	268	126,158	5	64	50	62	-	-	54	52	46	.88	-
Pittsfield, . . .	25,001	18,946,608	110	4,410	3,140	4,567	111	418	2,894	4,033	3,760	.93	142
Richmond, . . .	601	339,089	6	88	64	92	-	8	65	77	68	.89	5
Sandisfield, . . .	657	311,398	8	124	87	136	4	9	86	90	78	.87	-
Savoy, . . .	549	178,560	7	91	73	93	4	4	65	75	66	.88	8
Sheffield, . . .	1,782	928,265	13	256	195	301	4	39	211	242	211	.87	7
Stockbridge, . . .	2,022	3,515,667	11	370	264	381	-	41	210	338	312	.92	18
Tyringham, . . .	314	261,619	4	58	40	50	-	1	40	41	36	.90	4
Washington, . . .	339	273,519	5	65	51	88	-	4	57	57	47	.83	4
West Stockbridge, . . .	1,023	382,541	7	196	139	182	2	5	131	147	131	.89	6
Williamstown, . . .	4,425	3,120,940	23	808	599	852	5	95	593	756	720	.95	19
Windsor, . . .	513	275,400	7	105	78	108	3	3	76	99	80	.83	2
Totals, . . .	98,330	\$69,483,737	483	17,939	13,104	17,194	394	1,547	11,498	15,061	13,925	.92	618

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.						LENGTH OF SCHOOLING.		HIGH SCHOOLS.							
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
			In high schools.	In elemen- tary schools.												
		Men.	Women.													
Barnstable, . . . . .	7	23	5	-	21	\$75 71	\$47 01	185-14	8-16	2	6	130	38	27	{ 9-18 9-18 }	{ \$6,897 19 3 975 00 }
Bourne, . . . . .	2	11	3	-	5	90 86	42 87	92-7	8-6	1	3	67	17	9	9-7	3 975 00
Brewster, . . . . .	1	3	1	-	3	80 00	41 66	34-10	8-12	1	1	15	2	4	9	1,023 00
Chatham, . . . . .	1	11	3	1	4	100 00	33 38	99	9-18	1	3	76	17	10	9	2,206 00
Dennis, . . . . .	3	10	1	-	7	65 00	45 00	117	9	2	2	60	27	12	{ 9 9 }	{ 1,684 44 - }
Eastham, . . . . .	-	2	-	-	2	-	40 00	17-10	8-15	-	-	-	-	-	-	-
Falmouth, . . . . .	3	18	4	-	12	94 00	50 00	162	9	1	4	71	23	11	10	6,199 67
Harwich, . . . . .	1	12	2	-	2	85 00	38 33	101-4	8-9	1	2	60	14	2	9-18	1,380 90
Mashpee, . . . . .	1	1	-	1	1	45 00	40 00	17-10	8-15	-	-	-	-	-	-	-
Orleans, . . . . .	1	5	2	1	3	85 00	42 50	36-4	9-1	1	2	46	4	5	9-15	1,709 91
Provincetown, . . . . .	1	24	2	-	13	120 00	40 97	209-10	9-10	1	3	69	29	9	10	2,932 25
Sandwich, . . . . .	1	9	1	-	-	58 82	42 02	67-5	8-8	1	3	35	13	6	9-6	1,940 00
Truro, . . . . .	1	4	-	-	2	48 00	47 00	47-10	9-10	1	-	-	-	-	-	-
Wellfleet, . . . . .	1	5	2	-	3	85 00	38 50	48	9-12	1	2	23	13	5	10	1,499 15
Yarmouth, . . . . .	2	10	1	1	7	82 50	46 43	80-18	8-19	1	1	23	9	14	8-18	2,560 15
Totals, . . . . .	26	148	27	4	85	\$79 25	\$43 20	1,316-2	9	14	32	675	206	114	9-10	\$34,007 66

# SCHOOL RETURNS.

V

## BERKSHIRE COUNTY — CONTINUED.

	4	49	5	10	213	\$109 97	\$44 97	4,464-5	9-5	10	54	1,455	544	192	9-12	\$62,886 96
Adams, . . .	4	49	5	10	213	\$109 97	\$44 97	4,464-5	9-5	10	54	1,455	544	192	9-12	\$62,886 96
Alford, . . .	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Becket, . . .	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cheshire, . . .	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clarksburg, . . .	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dalton, . . .	1	18	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Egremont, . . .	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida, . . .	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gt. Barrington, . . .	4	35	6	1	16	113 08	38 40	40-10	9-12	1	7	173	63	30	10-2	8,174 45
Hancock, . . .	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hinsdale, . . .	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lanesborough, . . .	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lee, . . .	-	17	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Lenox, . . .	1	23	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Monterey, . . .	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mt. Washington, . . .	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Ashford, . . .	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Marlborough, . . .	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Adams, . . .	7	106	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Otis, . . .	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peru, . . .	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pittsfield, . . .	10	127	8	1	11	108 00	49 53	44-1	9-16	1	11	364	159	52	9-17	14,467 15
Richmond, . . .	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sandisfield, . . .	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Savoy, . . .	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheffield, . . .	1	13	2	1	12	65 00	32 93	117-14	9-1	1	2	45	16	3	9-12	1,277 04
Stockbridge, . . .	2	13	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Tyringham, . . .	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington, . . .	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West Stockbridge, . . .	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Williamstown, . . .	5	27	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Windsor, . . .	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals, . . .	39	554	47	10	213	\$109 97	\$44 97	4,464-5	9-5	10	54	1,455	544	192	9-12	\$62,886 96

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and transient service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.		
Barnstable,	\$17,600 14	\$3,119 30	\$2,630 43	\$42 00	\$1,500 00	\$1,502 75	\$758 85	\$27,153 47	\$23,663 66
Bourne,	6,004 14	1,869 80	2,027 44	120 70	675 00	847 81	767 35	12,313 06	11,637 05
Brewster,	1,979 59	1,038 50	255 24	100 00	251 63	140 10	36 00	3,801 06	2,613 14
Chatham,	4,191 05	33 33	931 49	240 00	582 87	710 63	338 90	7,028 27	5,500 96
Dennis,	5,750 00	—	855 31	110 00	812 50	406 26	175 00	8,109 07	6,754 70
Eastham,	1,137 60	1,217 10	177 53	—	108 57	141 03	42 26	2,834 09	1,659 30
Falmouth,	11,944 00	3,111 85	2,624 76	90 00	1,400 00	1,291 88	132 65	20,595 14	20,122 14
Harwich,	4,960 37	389 00	903 67	161 38	691 44	608 46	67 50	7,781 82	6,327 42
Mashpee,	824 75	—	69 40	30 00	162 50	104 43	20 24	1,211 32	586 32
Orleans,	2,985 70	1,137 55	610 49	20 00	217 17	456 55	61 66	5,539 12	3,524 71
Provincetown,	10,624 39	—	1,938 55	26 75	1,089 24	1,096 21	1,318 50	16,093 64	14,266 08
Sandwich,	4,065 17	506 70	752 97	—	675 00	644 91	152 60	6,797 35	5,144 95
Truro,	2,437 50	23 75	379 36	92 50	255 99	235 05	39 00	3,463 15	1,952 27
Wellfleet,	2,635 00	522 60	351 32	95 00	255 32	156 72	154 90	4,170 86	3,238 34
Yarmouth,	6,485 00	939 10	829 44	165 00	562 44	497 24	105 28	9,583 50	6,476 03
Totals,	\$83,625 16	\$13,958 58	\$15,337 40	\$1,293 33	\$9,239 67	\$8,840 03	\$4,170 69	\$136,404 86	\$113,032 56

## SCHOOL RETURNS.

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## BERKSHIRE COUNTY — CONTINUED.

Adams, . . .	\$28,880 93	\$255 60	\$6,105 46	\$375 00	\$2,400 00	\$2,637 54	\$1,436 77	\$42,091 30	—	\$42,091 30
Alford, . . .	990 00	144 00	58 75	—	204 55	96 61	11 00	1,504 91	\$961 96	539 95
Becket, . . .	3,512 52	272 25	243 67	58 75	359 91	191 50	72 76	4,711 86	2,572 36	2,139 00
Cheshire, . . .	3,129 30	712 00	699 57	60 00	450 00	315 59	188 85	5,555 31	2,024 38	3,530 93
Clarksburg, . . .	2,847 00	—	352 70	50 00	500 00	444 56	74 75	4,269 01	2,307 42	1,961 59
Darton, . . .	10,095 40	278 00	2,708 27	225 00	1,050 00	1,102 40	596 87	16,055 94	952 50	15,103 44
Egremont, . . .	2,017 00	—	246 22	—	272 60	90 93	151 14	2,777 89	1,577 89	1,200 00
Florida, . . .	1,638 00	—	69 56	70 95	240 00	86 21	23 41	2,128 13	1,367 68	760 45
Great Barrington, . . .	17,857 25	1,131 31	4,205 61	—	1,800 00	2,002 49	916 65	27,913 31	2,253 75	25,659 56
Hancock, . . .	1,691 00	—	96 90	43 00	500 00	157 79	10 00	2,498 69	1,547 79	950 90
Hinsdale, . . .	3,652 92	264 00	446 65	—	517 20	179 13	23 24	5,083 14	1,867 56	3,215 58
Lanesborough, . . .	1,938 80	400 75	379 68	115 00	416 64	174 26	81 71	3,506 84	1,747 20	1,759 64
Lee, . . .	9,739 20	744 42	1,848 55	413 00	720 00	1,437 37	476 55	15,369 13	1,950 12	13,419 01
Lenox, . . .	11,772 75	690 58	2,446 20	30 00	1,500 00	1,457 34	580 79	18,477 66	200 00	18,277 66
Monterey, . . .	1,461 00	433 50	71 50	52 75	300 00	168 61	42 25	2,529 61	1,748 76	780 85
Mt. Washington, . . .	1,177 00	—	85 50	17 50	150 00	242 31	28 20	1,700 51	1,508 50	192 01
New Ashford, . . .	350 00	—	33 60	43 50	84 06	59 11	5 00	575 27	513 66	61 61
New Marlborough, . . .	3,083 25	158 75	257 67	65 00	570 00	193 68	173 90	4,502 25	1,796 13	2,706 12
North Adams, . . .	66,619 34	1,076 00	16,370 51	1,950 00	2,750 00	3,255 28	852 40	92,873 53	—	92,873 53
Otis, . . .	1,207 50	139 50	100 00	37 10	300 00	236 03	10 73	2,030 86	1,454 50	576 36
Peru, . . .	1,165 24	163 90	53 50	30 00	258 64	295 36	23 00	1,989 64	1,379 64	610 00
Pittsfield, . . .	73,034 85	120 00	15,274 77	1,374 75	2,300 00	6,310 23	4,830 58	103,245 18	—	103,245 18
Richmond, . . .	2,207 50	153 89	232 90	28 92	524 92	130 20	15 87	3,294 20	1,932 06	1,362 14
Sandisfield, . . .	2,119 85	51 00	158 71	65 69	375 00	62 93	25 36	2,858 54	1,076 19	1,782 35
Savoy, . . .	2,130 00	215 00	74 00	45 00	407 33	136 45	18 75	3,026 53	1,859 08	1,167 45
Sheffield, . . .	4,775 75	300 50	538 34	47 50	780 00	682 48	293 02	7,417 39	2,014 45	5,403 14
Stockbridge, . . .	8,165 00	1,476 50	1,480 17	62 00	500 00	1,475 63	388 00	13,547 39	540 53	13,006 86
Tyringham, . . .	1,056 00	91 50	111 25	30 00	180 00	94 39	21 73	1,584 87	700 00	884 87
Washington, . . .	1,551 00	45 00	112 33	6 50	197 80	100 71	42 01	2,055 35	1,224 75	830 60
West Stockbridge, . . .	3,345 20	379 51	385 11	50 00	545 46	178 84	68 45	4,952 57	2,574 94	2,377 63
Williamstown, . . .	12,979 57	111 00	3,629 74	160 60	1,200 00	1,211 00	461 73	19,753 64	228 86	19,524 78
Windsor, . . .	2,149 50	200 25	114 24	—	407 34	531 54	12 56	3,415 43	2,172 35	1,243 08
Totals, . . .	\$288,339 62	\$10,008 80	\$58,991 63	\$5,507 51	\$22,761 45	\$25,738 54	\$11,958 03	\$423,295 58	\$44,058 01	\$379,237 57

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school buildings, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Barnstable,	-	\$1,325 21	\$1,325 21	\$1,325 21	-	\$1,325 21	\$24,988 87	\$10,233 00	\$394 32	\$363 88
Bourne,	\$2,000 00	650 41	650 41	2,650 41	-	2,650 41	14,287 46	-	-	-
Brewster,	-	268 03	268 03	268 03	-	268 03	2,881 17	-	-	145 66
Chatham,	-	\$150 00	-	150 00	-	150 00	5,710 96	-	-	151 60
Dennis,	-	-	-	-	-	-	6,754 70	-	-	168 60
Eastham,	-	86 02	86 02	86 02	-	86 02	1,250 81	-	-	-
Falmouth,	-	1,616 03	1,616 03	1,616 03	-	1,616 03	21,738 17	10,000 00	473 00	-
Harwich,	-	381 95	386 95	386 95	-	386 95	6,714 37	1,000 00	35 00	192 77
Mashpee,	-	84 16	84 16	84 16	-	84 16	670 48	-	-	54 15
Orleans,	-	130 71	130 71	130 71	-	130 71	3,655 42	-	-	137 90
Provincetown,	-	200 00	200 00	1,983 63	-	1,983 63	16,249 71	-	-	-
Sandwich,	-	622 42	364 37	986 79	-	986 79	6,131 74	-	-	197 90
Truro,	-	173 89	173 89	173 89	-	173 89	2,126 16	-	-	-
Wellfleet,	-	59 20	59 20	59 20	-	59 20	3,297 54	-	-	-
Yarmouth,	-	402 88	402 88	552 88	-	552 88	7,028 91	15,000 00	900 00	-
Totals,	\$2,000 00	\$2,453 00	\$6,000 91	\$10,453 91	-	\$10,453 91	\$123,486 47	\$36,233 00	\$1,802 32	\$1,412 46



## SCHOOL RETURNS.

ix

## BERKSHIRE COUNTY — CONTINUED.

Adams, . . . . .	-	\$1,379 06	\$954 44	\$2,333 50	-	\$2,333 50	\$44,424 80	-	-	-	-
Alford, . . . . .	-	149 97	-	149 97	-	149 97	689 92	-	-	-	-
Becket, . . . . .	-	432 84	5 00	437 84	-	437 84	2,576 84	-	-	-	\$119 79
Cheshire, . . . . .	-	-	261 42	261 42	-	261 42	3,792 35	-	-	-	-
Clarksburg, . . . . .	-	296 00	229 02	525 02	-	525 02	2,486 61	-	-	-	-
Dalton, . . . . .	-	5,598 31	604 15	6,202 46	-	6,202 46	21,305 90	-	-	-	-
Egremont, . . . . .	-	-	27 61	27 61	-	27 61	1,227 61	-	-	-	55 24
Florida, . . . . .	-	-	3 00	3 00	\$3 00	-	760 45	-	-	-	518 84
Great Barrington, . . . . .	\$20,254 91	-	558 49	20,813 40	-	20,813 40	46,472 96	-	-	\$15 00	-
Hancock, . . . . .	-	-	40 08	40 08	-	40 08	990 98	\$200 00	-	-	-
Hinsdale, . . . . .	-	-	245 05	245 05	-	245 05	3,460 63	-	-	-	-
Lanesborough, . . . . .	-	667 16	225 11	892 27	-	892 27	2,651 91	1,000 00	-	-	-
Lee, . . . . .	-	-	347 92	347 92	-	347 92	13,766 93	-	-	-	-
Lenox, . . . . .	-	-	1,060 31	1,060 31	-	1,060 31	19,337 97	-	-	-	-
Monterey, . . . . .	-	-	18 70	18 70	-	18 70	799 55	-	-	-	90 95
Mount Washington, . . . . .	-	52 84	55 60	108 44	-	108 44	300 45	100 00	6 00	-	31 19
New Ashford, . . . . .	-	-	8 85	8 85	-	8 85	70 46	-	-	-	-
New Marlborough, . . . . .	-	266 56	63 57	330 13	-	330 13	3,036 25	-	-	-	271 23
North Adams, . . . . .	-	3,000 00	2,525 77	5,525 77	-	5,525 77	98,399 30	-	-	-	1,109 49
Otis, . . . . .	-	-	78 30	78 30	-	78 30	654 66	-	-	-	62 42
Peru, . . . . .	-	-	-	-	-	-	610 00	-	-	-	58 01
Pittsfield, . . . . .	-	8,594 13	4,367 14	12,961 27	-	12,961 27	110,206 45	-	-	-	-
Richmond, . . . . .	-	-	96 64	96 64	-	96 64	1,458 78	-	-	-	85 12
Sandisfield, . . . . .	-	40 00	10 27	50 27	-	50 27	1,832 62	1,290 00	77 40	-	99 00
Savoy, . . . . .	-	-	133 74	133 74	-	133 74	1,301 19	1,297 00	77 82	-	102 44
Sheffield, . . . . .	-	42 09	297 38	339 47	-	339 47	5,742 61	1,000 00	68 80	-	235 53
Stockbridge, . . . . .	-	-	818 54	818 54	-	818 54	13,825 40	-	-	-	-
Tyringham, . . . . .	-	15 00	72 36	87 36	-	87 36	972 23	-	-	-	68 55
Washington, . . . . .	-	-	57 84	57 84	-	57 84	888 44	-	-	-	82 04
West Stockbridge, . . . . .	-	28 61	84 21	112 82	-	112 82	2,490 45	-	-	-	-
Williamstown, . . . . .	-	224 00	792 19	1,016 19	-	1,016 19	20,540 97	-	-	-	-
Windsor, . . . . .	-	-	43 58	43 58	-	43 58	1,286 66	-	-	-	86 66
Totals, . . . . .	\$20,254 91	\$20,786 57	\$14,086 28	\$55,127 76	\$3 00	\$55,124 76	\$434,362 33	\$4,887 00	\$245 02	\$3,076 50	-

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		FUNDS WHOSE INCOME MUST BE APPROPRIATED TO ACADEMIES OR PRIVATE SCHOOLS.	
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.	Principal.	Income.
Barnstable,	—	\$56 00	1	1	1	1	1	1	1	1
Bourne, .	—	318 00	1	1	1	1	1	1	1	1
Brewster,	\$995 62	1	1	1	1	1	1	1	1	1
Chatham,	995 62	1	1	1	1	1	1	1	1	1
Dennis, .	845 62	1	1	1	1	1	1	1	1	1
Eastham,	1,056 50	1	1	1	1	1	1	1	1	1
Falmouth,	—	1	1	1	1	1	1	1	1	1
Harwich,	845 62	1	1	1	1	1	1	1	1	1
Mashpee,	500 00	1	1	1	1	1	1	1	1	1
Orleans, .	995 63	1	1	1	1	1	1	1	1	1
Provincetown,	1,077 50	1	1	1	1	1	1	1	1	1
Sandwich,	1,227 50	1	1	1	1	1	1	1	1	1
Truro, .	1,195 63	1	1	1	1	1	1	1	1	1
Wellfleet,	706 50	1	1	1	1	1	1	1	1	1
Yarmouth,	706 50	1	1	1	1	1	1	1	1	1
Totals,	\$11,148 24	\$374 00	1	1	1	1	1	1	1	1

## SCHOOL RETURNS.

## BERKSHIRE COUNTY — CONCLUDED.

[illegible]

## BOARD OF EDUCATION.

## BRISTOL COUNTY.

TOWNS AND CITIES.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.									
	No. of persons in towns be- tween 5 and 15 years of age.	No. of persons in towns be- tween 7 and 14 years of age.	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.		
Acushnet, .	239	171	220	—	4	174	189	173	.92	10		
Attleborough, .	2,440	1,672	2,421	81	192	1,690	2,086	1,916	.92	98		
Berkley, .	162	122	147	2	4	115	137	128	.93	—		
Dartmouth, .	744	516	682	5	34	495	583	530	.91	37		
Dighton, .	343	237	354	2	3	265	309	286	.92	1		
Easton, .	29	678	1,098	55	98	679	998	929	.93	53		
Fairhaven, .	846	659	885	—	82	578	785	728	.93	33		
Fall River, .	20,951	14,858	16,245	192	1,166	11,349	13,659	12,641	.93	359		
Freetown, .	273	207	269	2	4	206	239	209	.88	9		
Mansfield, .	828	602	877	2	80	547	785	699	.89	44		
New Bedford, .	12,926	9,105	10,637	137	597	7,649	9,559	8,786	.92	227		
No. Attleborough, .	1,257	897	1,387	3	150	943	1,248	1,141	.91	65		
Norton, .	318	224	300	—	27	187	276	251	.91	12		
Raynham, .	238	189	241	—	6	185	228	199	.87	11		
Rehoboth, .	352	290	343	5	12	261	282	255	.90	1		
Seekonk, .	257	189	311	1	4	210	242	211	.87	6		
Somerset, .	479	350	534	8	35	318	435	407	.94	15		

Swansea, . . .	1,839	1,205,093	12	311	232	334	5	5	242	276	249	.90	9
Taunton, . . .	30,967	21,840,382	140	5,564	4,045	5,350	-	311	3,430	4,611	4,339	.94	141
Westport, . . .	2,867	1,673,750	19	492	358	480	4	12	369	421	375	.89	20
Totals, . . .	269,257	\$212,069,451	940	49,973	35,601	43,115	501	2,826	29,892	37,348	34,452	.92	1,151

## DUKES COUNTY.

Chilmark, . . .	322	\$262,204	2	33	32	33	-	2	31	26	21	.83	1
Edgartown, . . .	1,175	850,045	5	184	110	186	-	24	106	162	146	.90	13
Gay Head, . . .	178	33,735	1	42	30	49	1	8	30	42	36	.86	3
Gosnold, . . .	161	352,616	1	18	11	19	1	1	11	18	16	.89	1
Oak Bluffs, . . .	1,138	1,774,450	6	261	197	195	-	31	159	189	178	.94	7
Tisbury, . . .	1,120	1,420,787	6	188	141	221	-	26	156	198	184	.93	14
West Tisbury, . . .	457	426,645	4	53	41	81	2	12	55	72	63	.87	7
Totals, . . .	4,551	\$5,120,482	25	779	562	784	4	104	548	707	644	.91	46

## BRISTOL COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.						LENGTH OF SCHOOLING.		HIGH SCHOOLS.							
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
			In high schools.	In elemen- tary schools.												
	Men.	Women.														
Acushnet, . . . . .	7		1	6	\$41 43	63-17	9	1	8	237	100	33	9-14	\$9,908 04		
Attleborough, . . . . .	3	65	8	33	49 05	465-5	9-10	1	1	1	1	1	1	1	1	1
Berkley, . . . . .	7		—	—	34 12	63	9	1	1	1	1	1	1	1	1	1
Dartmouth, . . . . .	2	26	3	4	67 50	202-18	8-16	3	3	48	21	13	9-13 9-12	1,815 00		
Dighton, . . . . .	—	12	—	4	—	107-5	8-18	—	—	—	—	—	—	—	—	—
Easton, . . . . .	2	36	4	15	145 00	275-13	9-10	1	4	110	31	22	9-13	5,345 00		
Fairhaven, . . . . .	1	22	3	18	200 00	185-17	9-6	1	4	89	31	20	9-16	4,324 00		
Fall River, . . . . .	27	391	15	78	130 83	2,940	10	1	26	752	286	101	10	39,199 70		
Freetown, . . . . .	8		—	6	—	66-15	8-7	—	—	—	—	—	—	—	—	—
Mansfield, . . . . .	2	22	4	11	109 44	191-15	9-11	1	4	92	33	14	9-7	4,423 04		
New Bedford, . . . . .	15	251	9	66	184 17	2,005-10	9-11	1	17	428	178	54	9-13	31,843 30		
No. Attleborough, . . . . .	2	37	6	19	112 82	299-3	9-1	1	6	149	44	37	9-15	6,335 00		
Norton, . . . . .	2	13	2	7	75 00	101-18	9-5	1	3	30	4	6	9-16	2,116 52		
Rayham, . . . . .	8		—	2	—	69-10	8-13	—	—	—	—	—	—	—	—	—
Rehoboth, . . . . .	15		—	2	—	133-1	8-17	—	—	—	—	—	—	—	—	—
Seekonk, . . . . .	9		—	2	—	78-15	8-15	—	—	—	—	—	—	—	—	—
Somerset, . . . . .	1	12	1	4	60 00	105	8-17	1	1	36	18	4	10	1,948 35		

## SCHOOL RETURNS.

XV

Swansea, .	1	11	-	-	4	48 00	36 00	101-14	8-10	-	-	-	-	-	-	-	-
Taunton, .	12	136	12	5	73	127 00	55 00	1,314-14	9-7	1	12	434	56	10	17,161 77	-	-
Westport, .	3	16	-	-	2	41 33	32 25	107-8	8-16	1	1	11	6	3	575 00	-	-
Totals,	73	1,104	68	28	356	\$132 06	\$53 00	8,938-18	9-10	14	89	2,416	905	363	\$124,994 72	-	-

## DUKES COUNTY — CONTINUED.

Chilmark, .	-	2	-	-	-	-	\$40 00	18	9	-	-	-	-	-	-	-	-
Edgartown,	1	6	1	1	1	\$80 00	41 70	44-15	8-19	1	2	35	13	2	\$1,648 64	-	-
Gay Head,	1	1	-	-	-	55 00	42 00	9	9	-	-	-	-	-	-	-	-
Gosnold, .	-	1	-	-	1	-	55 00	9	9	-	-	-	-	-	-	-	-
Oak Bluffs,	-	6	-	-	4	73 05	41 67	52-13	8-15	1	2	25	5	7	1,474 81	-	-
Tisbury, .	1	6	2	-	4	85 06	47 60	53-13	8-17	1	2	26	13	3	1,605 00	-	-
West Tisbury,	-	4	1	-	1	-	46 25	34-8	8-12	-	-	-	-	-	-	-	-
Totals,	4	26	7	1	11	\$73 28	\$44 15	221-9	8-17	3	6	86	31	12	\$4,728 45	-	-

## BRISTOL COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and transient service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Acushnet, . . . . .	\$3,441 59	\$743 50	\$645 26	\$150 00	\$325 00	\$287 00	\$45 35	\$5,637 70	\$1,858 04	\$3,779 66
Attleborough, . . . . .	38,079 41	2,343 75	10,225 47	1,265 13	1,674 98	3,499 72	3,266 23	60,354 69	907 75	59,446 94
Berkley, . . . . .	2,149 00	—	299 47	189 48	285 54	225 43	178 22	3,328 14	1,600 76	1,718 38
Dartmouth, . . . . .	9,565 66	1,313 50	1,871 43	274 50	750 00	706 47	421 95	14,903 51	776 46	14,127 05
Dighton, . . . . .	6,162 75	—	762 38	27 69	501 44	399 41	49 86	7,903 53	1,488 97	6,414 56
Easton, . . . . .	19,876 33	1,789 85	3,680 64	112 79	1,540 00	2,302 27	436 20	29,738 08	7,482 05	22,256 03
Fairhaven, . . . . .	17,659 14	2,600 50	2,937 12	251 55	1,450 00	1,760 38	1,395 87	28,054 56	10,062 00	17,992 56
Fall River, . . . . .	251,226 80	1,054 50	58,323 62	4,935 84	3,000 00	18,639 34	5,136 31	342,316 41	8,234 55	334,081 86
Freetown, . . . . .	3,481 07	407 00	372 64	90 20	500 04	202 53	91 83	5,145 31	1,538 88	3,606 43
Mansfield, . . . . .	12,447 80	629 87	3,031 68	260 00	660 00	2,013 03	674 41	19,716 79	1,204 98	18,512 11
New Bedford, . . . . .	201,854 22	552 40	38,638 84	5,279 41	4,937 50	13,947 13	11,504 12	276,713 62	3,795 01	272,918 61
No. Attleborough, . . . . .	20,474 64	—	4,976 57	36 00	1,900 00	1,842 33	2,074 56	31,304 10	51 00	31,253 10
Norton, . . . . .	7,056 50	590 40	1,246 42	64 75	600 00	433 99	77 89	10,069 95	1,741 76	8,328 19
Raynham, . . . . .	3,988 65	465 00	376 68	100 00	225 00	318 58	249 76	5,733 67	1,822 50	3,911 17
Rehoboth, . . . . .	5,135 95	—	305 64	161 00	644 71	308 39	129 44	6,685 13	2,173 75	4,511 38
Seekonk, . . . . .	3,926 50	—	546 43	95 00	600 00	235 39	55 75	5,459 07	2,209 07	3,250 00
Somerset, . . . . .	5,579 00	300 40	605 13	115 54	500 00	386 49	49 23	7,544 79	1,295 00	6,249 79



## SCHOOL RETURNS.

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Swansea, . . .	5,653 60	50 50	636 01	126 60	500 00	214 02	150 76	7,331 49	2,121 66	5,209 83
Taunton, . . .	88,729 61	1,227 00	16,563 09	942 50	2,225 03	3,967 52	5,467 03	119,121 78	2,769 79	116,351 99
Westport, . . .	6,185 88	357 00	748 91	259 55	750 00	441 50	223 96	8,966 83	1,397 85	7,568 98
Totals, . . .	\$712,684 10	\$14,434 17	\$146,793 46	\$14,737 53	\$23,570 24	\$52,130 92	\$31,678 73	\$996,029 15	\$54,540 53	\$941,488 62

## DUKES COUNTY — CONTINUED.

Chilmark, . . .	\$966 00	—	\$64 00	\$42 00	\$159 96	\$134 53	\$85 35	\$1,451 84	\$1,054 06	\$397 78
Edgartown, . . .	3,055 00	\$387 00	638 90	80 00	469 92	315 93	178 96	5,125 71	1,406 50	3,719 21
Gay Head, . . .	872 50	—	45 33	20 00	80 00	76 01	126 58	1,220 42	1,094 42	126 00
Gosnold, . . .	495 00	—	43 00	41 25	—	46 42	9 60	635 27	560 27	75 00
Oak Bluffs, . . .	2,965 00	285 00	750 45	125 00	400 00	314 61	280 00	5,120 06	540 30	4,579 76
Tisbury, . . .	3,457 55	203 80	596 38	60 00	366 61	532 64	141 28	5,358 26	1,734 50	3,623 76
West Tisbury, . . .	1,697 75	39 00	295 84	20 00	266 64	120 01	8 00	2,447 24	1,423 09	1,024 15
Totals, . . .	\$13,508 80	\$914 80	\$2,433 90	\$388 25	\$1,743 13	\$1,540 15	\$829 77	\$21,358 80	\$7,813 14	\$13,545 66

## BOARD OF EDUCATION.

## BRISTOL COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for support of the public schools, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.				Principal.	Income.	
Acushnet, . . . . .	-	-	\$128 82	\$128 82	-	\$3,908 48	-	-	\$355 30
Attleborough, . . . . .	-	\$4,866 11	4,022 72	8,888 83	-	68,335 77	-	-	2,135 48
Berkley, . . . . .	-	-	175 79	175 79	-	1,894 17	-	-	42 39
Dartmouth, . . . . .	\$2,360 21	1,211 08	700 75	4,272 04	-	18,399 09	\$2,000 00	\$80 80	615 25
Dighton, . . . . .	-	-	271 97	271 97	-	6,686 53	-	-	219 35
Easton, . . . . .	-	-	1,232 20	1,232 20	-	23,488 23	103,000 00	7,222 28	1,614 81
Fairhaven, . . . . .	-	505 99	1,009 24	1,009 24	-	19,001 80	7,500 00	305 34	573 70
Fall River, . . . . .	46,533 24	-	67,826 94	67,826 94	-	401,908 80	50,000 00	2,512 63	-
Freetown, . . . . .	3,212 76	-	3,374 93	3,374 93	-	6,981 36	-	-	212 56
Mansfield, . . . . .	-	-	1,632 67	1,632 67	-	20,144 78	-	-	605 18
New Bedford, . . . . .	48,580 70	859 97	8,746 19	58,186 86	-	331,105 47	51,000 00	3,060 00	1,347 83
North Attleborough, . . . . .	-	311 00	1,124 68	1,435 68	-	32,688 78	-	-	1,237 70
Norton, . . . . .	3,696 81	-	283 16	3,979 97	-	12,308 16	-	-	415 83
Raynham, . . . . .	-	-	151 14	151 14	-	4,062 31	-	-	133 91
Rehoboth, . . . . .	-	-	540 95	540 95	-	5,052 33	-	-	418 69
Seekonk, . . . . .	-	1,896 20	47 07	3,403 93	-	6,653 93	-	-	395 25
Somerset, . . . . .	-	-	117 18	117 18	-	6,366 97	-	339 04	192 66

## DUKES COUNTY — CONTINUED.

Swansea, . . . . .	120 15	100 95	326 84	547 91	—	547 94	5,757 77	—	—	399 84
Taunton, . . . . .	—	600 00	6,945 71	7,545 71	—	7,545 71	123,897 70	—	—	—
Westport, . . . . .	4,933 48	—	384 71	5,318 19	—	5,318 19	12,887 17	—	—	525 02
Totals, . . . . .	\$110,898 01	\$10,351 30	\$48,791 67	\$170,040 98	—	\$170,040 98	\$1,111,529 60	\$213,500 00	\$13,520 09	\$11,440 75

Chilmark, . . . . .	—	\$100 18	—	\$100 18	—	\$197 96	—	—	—	—
Edgartown, . . . . .	—	—	\$124 93	124 93	—	3,844 14	—	—	—	\$114 15
Gay Head, . . . . .	—	—	—	—	—	126 00	—	—	—	4 26
Gosnold, . . . . .	—	—	—	—	—	75 00	—	—	—	—
Oak Bluffs, . . . . .	—	499 75	—	499 75	—	5,079 51	—	—	—	121 55
Tisbury, . . . . .	—	—	130 28	130 28	—	3,754 04	—	—	—	158 20
West Tisbury, . . . . .	—	—	—	—	—	1,024 15	—	—	—	—
Totals, . . . . .	—	\$599 93	\$255 21	\$855 14	—	\$14,400 80	—	—	—	\$398 16



### SCHOOL RETURNS.

[illegible]

DUKES COUNTY — CONCLUDED.

[illegible]

## ESSEX COUNTY.

TOWNS AND CITIES.	Population — State Census of 1905.	Valuation — May 1, 1906.	No. of public schools.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.						
				No. of persons in towns between 5 and 15 years of age.	No. of persons in towns between 7 and 14 years of age.	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils within the year under 5 years of age.	No. of different pupils within the year over 15 years of age.	No. of different pupils within 14 years of age.	Average membership of all the schools.	Percentage of attendance based on average membership.	No. graduated from grammar schools.
Amesbury, . . . . .	8,840	\$5,167,085	26	1,600	1,176	1,023	2	154	618	943	.886	102
Andover, . . . . .	6,632	5,942,162	34	1,248	861	1,339	80	99	826	1,136	1,057	42
Beverly, . . . . .	15,223	23,224,925	68	2,745	1,946	3,279	—	367	1,886	2,827	2,599	167
Boxford, . . . . .	665	1,176,263	6	106	83	100	2	2	71	78	70	3
Danvers, . . . . .	9,063	5,569,435	35	1,422	1,032	1,728	11	208	1,167	1,508	1,427	78
Essex, . . . . .	1,790	1,063,361	9	321	214	370	1	38	265	321	304	23
Georgetown, . . . . .	1,840	995,584	8	304	210	310	1	3	227	267	248	23
Gloucester, . . . . .	26,011	21,690,842	106	4,592	3,299	4,985	45	652	3,203	4,673	4,533	175
Groveland, . . . . .	2,401	1,159,715	13	383	276	484	6	51	273	426	400	30
Hamilton, . . . . .	1,646	3,128,580	8	315	229	300	2	16	194	274	248	13
Haverhill, . . . . .	37,830	27,418,564	143	6,838	5,793	6,379	453	790	3,845	5,674	5,201	266
Ipswich, . . . . .	5,205	4,013,702	20	861	702	863	20	115	597	782	724	28
Lawrence, . . . . .	70,050	51,044,934	201	12,841	9,199	9,071	120	640	6,440	7,947	7,530	289
Lynn, . . . . .	77,042	62,829,252	230	12,442	9,115	11,972	—	959	7,151	9,855	9,132	460
Lynnfield, . . . . .	797	740,136	4	118	87	126	—	1	83	97	91	13
Manchester, . . . . .	2,618	11,360,627	10	503	331	438	2	57	274	399	379	21
Marblehead, . . . . .	7,209	7,357,790	29	1,126	818	1,294	63	123	793	1,207	1,114	80
Merrimac, . . . . .	1,884	1,208,685	11	318	236	399	4	52	263	355	335	23
Methuen, . . . . .	8,676	5,217,411	36	1,837	1,293	1,576	16	108	1,139	1,459	1,337	52
Middleton, . . . . .	1,068	734,390	3	173	129	160	—	—	121	138	122	9
Nahant, . . . . .	922	5,593,226	5	194	142	186	20	9	171	148	140	11

## SCHOOL RETURNS.

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Newbury, .	1,480	1,245,973	6	205	163	223	2	16	163	206	188	.91	16
Newburyport, .	14,675	11,159,621	46	2,358	1,963	2,174	7	249	1,433	1,984	1,831	.92	105
North Andover, .	4,614	4,558,309	25	800	580	951	13	67	613	797	759	.95	26
Peabody, .	13,098	9,137,949	45	2,437	1,752	2,075	6	202	1,237	1,901	1,740	.92	80
Rockport, .	4,447	3,063,834	19	840	588	867	2	75	610	818	795	.97	58
Rowley, .	1,388	734,693	8	303	224	257	-	2	187	227	207	.91	14
Salem, .	37,627	30,607,900	122	6,978	5,010	5,405	282	662	2,871	4,690	4,305	.92	253
Salisbury, .	1,622	810,305	8	268	200	239	2	4	208	213	195	.92	9
Saugus, .	6,253	4,739,451	33	1,326	935	1,568	1	130	1,087	1,367	1,265	.93	68
Swampscott, .	5,141	8,397,445	21	776	548	881	1	79	579	637	605	.92	62
Topsfield, .	1,095	1,037,303	4	130	96	142	-	12	98	117	99	.85	5
Wenham, .	924	2,142,300	5	172	139	145	2	4	100	142	126	.89	10
West Newbury, .	1,405	1,030,420	10	265	196	289	4	15	212	249	224	.90	14
Totals, .	381,181	\$325,301,472	1,357	67,145	49,585	61,598	1,170	5,961	39,010	53,885	50,216	.93	2,628

## ESSEX COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.				LENGTH OF SCHOOLING.			HIGH SCHOOLS.								
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
			In high schools.	In elemen- tary schools.												
	Men.	Women.														
Amesbury, .	3	32	8	—	10	\$98.33	\$45 00	238-14	9-4	1	8	218	64	30	9-6	\$7,200 00
Andover, .	2	40	6	1	22	134.21	57 63	316-5	9-6	1 <sup>1</sup>	7	118	30	14	9-7	8,207 50
Beverly, .	7	93	22	2	50	135.72	56 31	680	10	1	22	522	169	51	10	26,572 00
Boxford, .	—	6	—	—	4	—	40 57	56-10	9-8	1 <sup>2</sup>	—	15	—	—	8-15	1,000 00
Danvers, .	4	40	6	3	16	116.25	48 75	327-5	9-6	1	8	263	97	26	9-10	9,671 80
Essex, .	1	11	4	—	3	100 00	37 25	78	8-13	1	4	72	23	5	9-12	2,900 00
Georgetown, .	—	9	—	—	8	—	39 50	72	9	1 <sup>3</sup>	3	46	16	5	9-14	4,515 13
Gloucester, .	6	127	13	1	23	150 00	45 00	991-2	9-7	1	16	453	179	45	9-7	15,150 00
Groveland, .	2	13	3	1	10	70 00	38 92	112-13	8-13	1	3	67	19	9	9-15	2,465 60
Hamilton, .	—	9	—	—	5	—	47 77	74-2	9-5	—	—	—	—	—	—	—
Haverhill, .	12	184	14	—	67	124.78	63 65	1,394-5	9-15	1	22	606	251	80	9-15	24,200 00
Ipswich, .	1	23	4	2	5	180 00	40 00	191	9-11	1	4	91	36	20	9-12	4,865 00
Lawrence, .	18	255	18	7	45	147 64	52 90	1,919-4	9-11	1	24	648	268	75	9-11	30,462 00
Lynn, .	21	253	29	7	102	149 52	64 26	2,242-10	9-5	2	37	919	404	155	{ 9-15 9-15 }	53,795 54
Lynnfield, .	—	4	—	1	2	—	43 47	36-16	9-4	—	—	—	—	—	—	—
Manchester, .	2	16	4	1	9	145 00	68 50	95-12	9-11	1	4	69	18	13	9-15	5,876 00
Marblehead, .	1	38	1	1	18	130 00	47 62	285-16	9-17	1	6	148	59	12	9-18	5,900 00
Merrimac, .	2	11	3	—	3	87 50	41 13	101-15	9-5	1	3	69	23	6	9-16	2,802 50
Methuen, .	4	44	4	—	24	115 00	46 79	329-9	9-3	1	6	115	45	18	9-13	6,485 94
Middleton, .	—	3	—	1	2	—	44 00	28-14	9-11	—	—	—	—	—	—	—
Nahant, .	1	7	4	4	3	140 00	64 50	45-16	9-3	1	3	22	9	2	9-3	3,817 00



## SCHOOL RETURNS.

XXV

	7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	12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## ESSEX COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Amount included in the total expenditure as given in the preceding columns.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.	
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Amesbury, . . .	\$17,098 25	\$165 00	\$2,372 85	\$25 00	\$1,466 66	\$2,416 56	\$1,989 00	\$25,533 32	\$127 70	\$25,405 62
Andover, . . .	25,625 89	1,382 25	4,677 15	—	1,772 94	2,064 26	480 24	36,002 73	3,322 40	32,680 33
Beverly, . . .	67,120 48	2,399 95	12,450 58	1,299 00	2,200 00	7,097 69	1,787 18	94,354 88	—	94,354 88
Boxford, . . .	2,504 73	92 90	250 50	53 15	300 00	276 47	383 10	3,800 85	1,162 12	2,698 73
Danvers, . . .	24,696 00	700 00	5,161 10	248 30	1,600 00	2,596 93	1,050 27	36,052 60	815 50	35,237 10
Essex, . . .	4,910 00	356 25	961 75	70 00	600 00	573 69	77 78	7,549 47	1,457 88	6,091 59
Georgetown, . . .	3,869 00	1,654 93	1,032 56	4 00	600 00	355 92	125 32	7,641 73	2,131 94	5,506 79
Gloucester, . . .	66,120 00	2,000 00	16,867 60	1,360 00	2,300 00	5,548 71	923 27	95,119 58	—	95,119 58
Groveland, . . .	6,378 80	—	1,456 62	147 25	600 00	1,040 21	95 90	9,718 78	1,498 11	8,220 67
Hamilton, . . .	6,373 55	751 35	834 80	180 35	450 00	617 42	624 82	9,862 29	307 00	9,555 29
Haverhill, . . .	122,940 58	1,786 69	20,559 72	1,409 60	2,300 00	13,383 20	4,127 66	166,517 45	750 00	165,767 45
Ipswich, . . .	12,067 87	656 25	1,660 54	140 00	721 42	1,609 42	696 47	17,551 97	2,512 81	15,039 16
Lawrence, . . .	174,831 10	—	29,319 35	3,735 00	3,000 00	13,319 32	5,196 84	229,401 61	—	229,401 61
Lynn, . . .	206,177 72	—	31,974 74	5,374 14	3,000 00	20,541 39	4,969 17	272,037 16	1,376 99	270,660 17
Lynnfield, . . .	2,817 12	200 00	534 53	60 00	187 00	117 35	83 38	3,999 38	2,082 00	1,917 38
Manchester, . . .	12,043 15	1,083 99	3,266 82	—	1,563 39	1,383 71	2,016 93	21,357 99	—	21,357 99
Marblehead, . . .	18,895 74	186 00	3,973 38	50 00	1,080 00	2,035 29	331 65	26,552 06	—	26,552 06
Merrimac, . . .	6,333 90	328 28	1,112 97	75 00	365 00	544 76	272 75	9,032 66	1,627 89	7,404 77
Methuen, . . .	22,985 11	126 00	6,782 78	83 00	1,200 00	1,788 72	772 69	33,738 30	2,497 50	31,240 80
Middleton, . . .	2,316 00	777 00	357 99	108 00	300 00	238 51	124 86	4,222 36	1,823 83	2,398 53
Nahant, . . .	5,366 50	—	1,378 43	300 00	200 00	367 34	—	7,612 27	—	7,612 27

Newbury, .	3,047 20	1,562 50	1,100 54	78 00	300 00	343 63	54 99	6,576 86	2,022 92	4,553 94
Newburyport, .	31,287 87	16 65	5,924 17	650 00	1,320 00	3,724 82	77 40	43,000 91	2,465 96	40,534 95
North Andover, .	14,823 00	-	2,345 45	208 33	715 00	1,621 08	373 70	20,086 56	-	20,086 56
Peabody, .	34,180 89	705 60	6,838 28	667 79	1,770 00	4,555 29	1,256 67	49,974 52	266 50	49,708 02
Rockport, .	10,694 50	-	2,075 44	50 00	1,000 00	1,564 22	179 91	15,564 07	-	15,564 07
Rowley, .	2,978 75	-	633 28	64 44	300 00	390 18	169 74	4,536 39	1,547 27	2,989 12
Salem, .	102,110 77	280 00	17,475 11	2,010 00	2,500 00	8,264 89	1,599 32	134,240 09	-	134,240 09
Salisbury, .	2,989 00	496 95	465 68	138 17	300 00	295 15	127 41	4,812 36	1,494 16	3,318 20
Saugus, .	20,018 70	-	6,096 75	135 00	1,000 00	2,529 53	1,515 70	31,205 68	491 50	30,804 18
Swampscott, .	21,106 87	-	4,010 70	35 00	850 00	2,703 05	756 76	29,462 38	-	29,462 38
Topsfield, .	2,888 50	500 00	305 04	40 00	280 00	297 18	154 53	4,465 25	1,140 13	3,325 12
Wenham, .	3,640 00	287 00	330 06	145 00	300 00	173 05	72 86	4,947 97	894 33	4,053 64
West Newbury, .	4,549 70	532 75	578 10	114 94	600 00	546 27	56 04	6,977 80	2,170 75	4,807 05
Totals, .	\$1,065,787 24	\$19,028 29	\$195,255 36	\$19,058 46	\$37,041 41	\$104,965 21	\$32,524 31	\$1,473,660 28	\$35,990 19	\$1,437,670 09

## ESSEX COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school purposes, that is, for all school buildings.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Amesbury, . . . . .	-	\$4,797 67	\$1,250 00	\$6,047 67	-	\$6,047 67	\$31,453 29	-	-	-
Andover, . . . . .	-	4,189 24	725 01	4,914 25	-	4,914 25	37,594 58	\$75,005 00	\$3,800 15	-
Beverly, . . . . .	\$48,818 97	49,886 24	4,882 98	103,588 19	-	103,588 19	197,943 07	3,000 00	670 63	\$465 48
Boxford, . . . . .	-	-	85 28	85 28	-	85 28	2,784 01	3,400 00	109 62	-
Danvers, . . . . .	-	1,768 78	1,050 27	2,819 05	-	2,819 05	38,056 15	-	-	765 40
Essex, . . . . .	-	-	510 93	510 93	-	510 93	6,602 52	-	-	150 41
Georgetown, . . . . .	-	-	44 48	44 48	-	44 48	5,551 27	-	-	201 67
Gloucester, . . . . .	-	4,175 64	2,657 44	6,833 08	-	6,833 08	101,952 66	10,000 00	350 00	1,101 68
Groveland, . . . . .	-	-	747 25	747 25	-	747 25	8,967 92	-	-	-
Hamilton, . . . . .	-	14,680 83	103 83	14,784 66	-	14,784 66	24,339 95	-	-	372 54
Haverhill, . . . . .	57,510 81	7,817 58	12,557 18	77,885 57	-	77,885 57	243,653 02	6,020 00	258 00	-
Ipswich, . . . . .	-	2,123 50	647 53	2,771 03	-	2,771 03	17,810 19	75,607 46	2,512 81	415 90
Lawrence, . . . . .	-	1,300 00	19,932 44	21,232 44	-	21,232 44	250,634 05	-	-	-
Lynn, . . . . .	15,346 87	20,531 76	11,576 43	47,455 06	-	47,455 06	318,115 23	-	-	-
Lynnfield, . . . . .	-	185 00	-	185 00	-	185 00	2,102 38	-	-	-
Manchester, . . . . .	-	-	-	-	-	-	21,357 99	-	-	-
Marblehead, . . . . .	25,356 76	-	444 04	25,800 80	-	25,800 80	52,352 86	-	-	-
Merrimac, . . . . .	-	201 58	725 76	927 34	-	927 34	8,332 11	-	-	147 24
Methuen, . . . . .	-	-	1,529 97	1,529 97	-	1,529 97	32,770 77	-	-	980 60
Middleton, . . . . .	-	656 19	152 46	808 65	-	808 65	3,207 18	-	-	126 99
Nahant, . . . . .	-	-	-	-	-	-	7,612 27	-	-	-

## SCHOOL RETURNS.

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Newbury, . . . . .	-	7,327 13	105 90	7,433 03	-	7,433 03	11,986 97	-	148 62
Newburyport, . . . . .	-	1,000 00	2,000 00	3,000 00	-	3,000 00	43,534 95	675 00	-
North Andover, . . . . .	981 07	-	2,404 97	3,386 04	300 20	3,085 84	23,172 40	161 20	-
Peabody, . . . . .	-	-	1,921 09	1,921 09	-	1,921 09	51,629 11	66 00	1,177 59
Rockport, . . . . .	23,992 25	349 85	760 10	25,102 20	-	25,102 20	40,666 27	-	-
Rowley, . . . . .	-	28 82	36 24	65 06	-	65 06	3,054 18	-	-
Salem, . . . . .	-	3,110 00	5,257 14	8,367 14	-	8,367 14	142,607 23	-	1,854 64
Salisbury, . . . . .	-	-	230 67	230 67	-	230 67	3,548 87	-	-
Saugus, . . . . .	51,936 21	500 00	-	52,436 21	-	52,436 21	83,240 39	-	-
Swampscott, . . . . .	-	2,741 50	894 87	3,636 37	-	3,636 37	33,098 75	-	-
Topsfield, . . . . .	-	-	-	-	-	-	3,325 12	-	162 42
Wenham, . . . . .	-	-	35 81	35 81	-	35 81	4,089 45	-	213 60
West Newbury, . . . . .	-	-	63 28	63 28	-	63 28	4,870 33	-	-
Totals, . . . . .	\$223,942 94	\$127,371 31	\$73,333 35	\$424,647 60	\$300 20	\$424,347 40	\$1,862,017 49	\$8,820 41	\$8,284 78
						\$199,357 46			

## BOARD OF EDUCATION.

## ESSEX COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 28, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		Principal.	Income.
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.		
Amesbury,	—	—	2	581	2	755	\$66,210 61	\$1,899 00	\$447,801 89	\$17,118 21
Andover,	—	\$600 00	1	—	—	52	—	—	—	—
Beverly,	—	—	1	15	3	—	—	—	20,000 00	—
Boxford,	—	—	—	—	—	—	—	—	—	—
Danvers,	—	190 00	1	—	—	—	—	—	—	—
Essex,	—	—	—	—	—	—	—	—	—	—
Georgetown,	—	—	—	—	—	—	—	—	—	—
Gloucester,	—	—	—	—	—	259	—	2,000 00	—	—
Groveland,	—	—	—	—	—	—	—	—	—	—
Hamilton,	—	1,077 50	—	—	—	—	—	—	—	—
Haverhill,	—	—	1	141	6	1,782	14,100 00	—	300,000 00	—
Ipswich,	—	—	—	—	9	3,484	—	840 00	—	—
Lawrence,	—	—	—	—	6	2,934	—	—	—	—
Lynn,	—	—	—	—	—	—	—	—	—	—
Lynnfield,	—	856 50	—	—	—	—	—	—	—	—
Manchester,	—	—	—	—	—	—	—	—	—	—
Marblehead,	—	—	—	—	—	—	—	—	—	—
Merrimac,	—	845 63	—	—	1	23	—	9,200 00	—	—
Methuen,	—	—	—	—	1	71	—	500 00	—	—
Middleton,	—	995 63	—	—	—	—	—	—	—	—
Nahant,	—	—	—	—	—	—	—	—	—	—

TOWNS AND CITIES.

## SCHOOL RETURNS.

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Newbury, . . . . .	1,077 50	40 00	1	57	6	602	1,000 00	130,000 00	'3,500 00
Newburyport, . . . . .	-	-	1	-	-	-	-	-	-
North Andover, . . . . .	-	-	-	-	1	653	-	-	-
Peabody, . . . . .	-	182 00	-	-	-	-	-	-	-
Rockport, . . . . .	-	-	-	-	-	-	-	-	-
Rowley, . . . . .	995 63	-	-	-	10	2,975	42,000 00	-	-
Salem, . . . . .	-	-	-	-	-	-	-	-	-
Salisbury, . . . . .	995 63	-	-	-	-	-	-	-	-
Saugus, . . . . .	-	-	-	-	-	-	-	-	-
Swampscott, . . . . .	845 63	-	-	-	-	-	-	-	-
Topsfield, . . . . .	770 63	-	-	-	-	-	-	-	-
Wenham, . . . . .	1,077 50	-	-	-	-	-	-	-	-
West Newbury, . . . . .	-	-	-	-	-	-	-	-	-
Totals, . . . . .	\$12,085 52	\$1,012 00	5	794	47	13,590	\$80,310 61	\$897,801 89	\$20,618 21

## FRANKLIN COUNTY.

TOWNS AND CITIES.	Population—State Census of 1905.	Valuation—May 1, 1906.	No. of public schools.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.						
				No. of persons in towns between 5 and 15 years of age.	No. of persons in towns between 7 and 14 years of age.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.
Ashfield, . . . . .	959	\$588,321	11	146	107	180	2	23	112	183	146	18
Barnardston, . . . . .	769	414,760	6	120	84	146	—	2	33	126	117	9
Buckland, . . . . .	1,500	699,321	8	265	203	255	—	1	191	238	225	23
Charlмонт, . . . . .	1,002	388,275	10	179	127	173	3	2	168	156	147	11
Colrain, . . . . .	1,780	625,890	15	364	275	347	1	8	282	303	282	3
Conway, . . . . .	1,340	663,066	12	214	161	268	—	4	161	221	209	9
Deerfield, . . . . .	2,112	1,534,841	13	333	262	305	2	10	221	273	247	19
Erving, . . . . .	1,094	873,512	7	185	131	206	1	4	154	196	184	13
Gill, . . . . .	1,023	413,405	6	166	118	156	—	1	114	141	134	5
Greenfield, . . . . .	9,156	6,835,119	43	1,545	1,043	1,718	57	210	1,116	1,565	1,452	76
Hawley, . . . . .	448	156,383	6	77	60	88	2	—	68	68	64	10
Heath, . . . . .	356	160,951	4	59	43	68	1	3	43	55	51	6
Leverett, . . . . .	703	334,251	4	123	106	126	—	2	106	115	103	5
Leyden, . . . . .	408	198,321	5	64	45	92	2	9	65	74	66	5
Monroe, . . . . .	269	155,285	4	57	42	59	—	2	42	51	48	2
Montague, . . . . .	7,015	4,078,635	31	1,338	991	1,205	7	106	877	1,100	1,036	80
New Salem, . . . . .	672	321,510	8	105	80	132	2	28	119	118	108	10
Northfield, . . . . .	2,017	1,203,794	9	252	184	286	7	36	193	229	212	13
Orange, . . . . .	5,578	3,460,298	23	682	682	1,079	1	153	714	1,026	951	68
Rowe, . . . . .	533	171,208	6	100	68	100	2	2	81	82	76	5
Shelburne, . . . . .	1,515	1,014,914	10	231	170	260	—	40	170	237	227	16
Shutesbury, . . . . .	374	220,614	3	54	37	58	—	2	46	49	47	3



# SCHOOL RETURNS.

xxxiii

## HAMPDEN COUNTY.

Sunderland, . . .	910	480,270	4	151	115	135	-	1	100	129	120	.93	7
Warwick, . . .	527	333,460	4	107	86	117	-	4	89	96	86	.90	5
Wendell, . . .	480	238,375	5	98	77	73	1	-	60	68	65	.96	3
Whately, . . .	822	433,057	6	99	73	101	1	2	68	78	70	.90	4
Totals, . . .	43,362	\$26,006,836	263	7,408	5,370	7,733	92	655	5,393	6,947	6,473	.93	423

Agawam, . . .	2,795	\$1,641,876	15	484	347	457	8	11	353	431	394	.91	15
Blandford, . . .	746	435,754	7	118	90	148	6	8	118	110	99	.90	5
Brimfield, . . .	894	397,635	7	146	100	124	3	1	120	106	98	.92	5
Chester, . . .	1,366	658,538	10	279	264	325	5	28	192	247	222	.90	12
Chicopee, . . .	20,191	10,297,190	75	3,544	2,648	2,725	80	167	1,927	2,493	2,209	.92	71
E. Longmeadow, . . .	1,327	642,155	10	344	259	353	4	9	291	323	283	.88	3
Granville, . . .	865	405,998	9	167	122	176	-	4	130	146	132	.89	8
Hampden, . . .	561	363,809	6	98	77	114	6	3	84	90	85	.94	3
Holland, . . .	151	86,516	1	21	14	21	-	-	16	15	14	.93	3
Holyoke, . . .	49,934	43,043,800	145	10,585	7,323	7,165	582	578	4,503	6,108	5,655	.93	299
Longmeadow, . . .	964	1,039,122	5	188	157	158	-	7	104	133	125	.94	6
Ludlow, . . .	3,881	3,027,682	20	697	526	689	5	41	513	612	573	.93	7
Monson, . . .	4,344	1,714,316	23	668	483	770	5	102	475	675	627	.93	39
Montgomery, . . .	259	146,979	4	46	32	54	2	4	34	42	38	.90	2
Palmer, . . .	7,755	3,616,118	27	1,238	921	1,224	4	107	800	1,084	1,040	.95	60
Russell, . . .	1,053	639,526	7	170	132	200	2	6	144	150	135	.90	5
Southwick, . . .	1,048	634,220	10	167	130	195	-	8	162	147	132	.92	9
Springfield, . . .	73,540	86,503,181	283	12,338	8,792	13,601	756	1,222	8,022	11,372	10,606	.93	475
Tolland, . . .	274	169,673	2	34	23	41	-	5	22	23	20	.87	2
Wales, . . .	645	265,120	4	118	96	115	2	-	90	99	91	.92	5
Westfield, . . .	13,611	8,736,827	54	2,433	1,654	2,290	76	268	1,448	2,101	1,880	.89	121
West Springfield, . . .	8,101	5,890,682	42	1,627	1,148	1,845	84	194	1,127	1,665	1,533	.92	54
Wilbraham, . . .	1,708	1,018,822	13	237	169	277	6	19	201	240	222	.93	12
Totals, . . .	196,013	\$171,427,539	779	35,747	25,507	33,067	1,636	2,792	20,876	28,412	26,303	.93	1,221

## BOARD OF EDUCATION.

## FRANKLIN COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.					LENGTH OF SCHOOLING.			HIGH SCHOOLS.							
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
	Men.	Women.	In high schools.	In elementary schools.												
Ashfield.	1	11	2	-	1	\$85 00	\$29 82	82-15	7-10	1	2	27	10	1	8-15	\$1,799 10
Barnardston.	1	6	2	-	1	90 00	38 00	57-10	8-11	1	2	30	9	4	10	1,645 80
Buckland.	-	9	-	-	1	-	41 33	69-6	8-13	-	-	-	-	-	-	-
Charlemont.	-	10	-	-	1	-	37 88	81-10	8-3	-	-	-	-	-	-	-
Colrain.	-	15	-	1	1	-	30 80	133-18	8-19	-	-	-	-	-	-	-
Conway.	1	12	3	-	3	60 00	32 00	99-10	8-5	1	2	27	9	5	10	1 333 39
Deerfield.	1	13	-	-	8	-	37 08	113-7	8-14	1	4	56	17	11	8-1	4,198 98
Erving.	-	7	-	-	1	-	39 02	62-4	8-18	-	-	-	-	-	-	-
Gill.	-	6	-	-	1	-	39 30	50-10	8-18	-	-	-	-	-	-	-
Greenfield.	2	49	7	2	25	137 50	46 90	423-11	9-16	1	7	215	80	32	9-18	8,031 00
Hawley.	-	6	-	-	4	-	33 96	48	8	-	-	-	-	-	-	-
Heath.	-	6	-	-	4	-	34 43	32	8	-	-	-	-	-	-	-
Leverett.	-	4	-	-	1	-	39 81	35-16	8-19	-	-	-	-	-	-	-
Leyden.	-	5	-	-	3	-	36 00	38-5	8-10	-	-	-	-	-	-	-
Monroe.	-	4	-	-	2	-	27 33	36	9	-	-	-	-	-	-	-
Montague.	2	39	8	-	24	120 00	47 15	285-12	9-4	2	9	188	65	16	{ 9-15 9-15 }	8,704 62
New Salem.	1	8	2	2	-	80 00	28 92	68-16	8-12	1	2	31	12	7	10	1,235 00
Northfield.	1	9	1	1	2	40 00	45 00	80-11	9	1	2	39	18	-	9-10	1,367 44
Orange.	1	28	6	-	14	155 00	43 25	205-15	8-18	1	6	186	75	42	9-17	6,509 90
Rowe.	-	6	-	-	2	-	36 00	44	8	-	-	-	-	-	-	-
Shelburne.	1	13	5	-	4	140 00	42 85	89-11	8-19	1	5	154	54	25	9-14	5,207 47
Shutesbury.	-	3	1	-	1	-	38 16	25-8	8-9	-	-	-	-	-	-	-

## SCHOOL RETURNS.

XXXV

Sunderland, . . . . .	-	5	-	1	-	39 20	36	9	-	-	-	-	-	-	-	-
Warwick, . . . . .	-	4	-	1	-	38 22	36	9	-	-	-	-	-	-	-	-
Wendell, . . . . .	-	5	-	2	-	30 55	40	8	-	-	-	-	-	-	-	-
Whately, . . . . .	-	6	-	6	-	36 67	54	9	-	-	-	-	-	-	-	-
Totals, . . . . .	11	289	36	6	109	\$115 00	\$40 12	2,320-15	8-17	11	41	953	349	143	9-11	\$40,032 70

## HAMPDEN COUNTY — CONTINUED.

Arawam, . . . . .	1	14	-	1	8	\$56 00	\$42 77	133-5	8-17	-	-	-	-	-	-	-
Blandford, . . . . .	-	7	-	1	2	-	34 28	59-10	8-10	-	-	-	-	-	-	-
Brimfield, . . . . .	1	7	3	1	1	140 00	41 29	61	8-14	4	4	26	5	4	9-13	-
Chester, . . . . .	1	10	1	5	5	87 00	39 95	89-2	8-18	2	2	40	19	6	9-19	\$2,412 78
Chicopee, . . . . .	2	82	6	53	53	180 00	47 73	722-4	9-13	1	7	130	48	20	9-15	9,757 23
E. Longmeadow, . . . . .	-	10	-	1	6	-	44 43	91	9-2	-	-	-	-	-	-	-
Granville, . . . . .	-	9	-	5	5	-	36 00	78-15	8-15	-	-	-	-	-	-	-
Hampden, . . . . .	-	6	-	1	1	-	37 49	57	9-10	-	-	-	-	-	-	-
Holland, . . . . .	-	1	-	1	1	-	48 00	8-14	8-14	1	26	681	230	88	9-16	40,180 05
Holyoke, . . . . .	18	175	24	8	116	137 64	61 99	1,431-15	9-17	1	-	-	-	-	-	-
Longmeadow, . . . . .	-	5	-	4	4	-	50 80	47-3	9-16	-	-	-	-	-	-	-
Ludlow, . . . . .	-	23	-	1	18	-	45 00	186-12	9-6	1	2	24	-	4	9-13	1,717 04
Monson, . . . . .	4	27	6	4	4	100 00	40 66	207-10	9-1	1	7	89	40	12	9-11	2,654 75
Montgomery, . . . . .	-	4	-	3	3	-	31 75	32-10	8-2	-	-	-	-	-	-	-
Palmer, . . . . .	2	30	5	2	15	94 00	46 83	245-10	9-1	1	5	114	49	20	9-14	5,484 62
Russell, . . . . .	-	7	-	6	6	-	38 62	60-10	9-10	-	-	-	-	-	-	-
Southwick, . . . . .	-	10	-	1	2	-	38 20	91-10	9-4	-	-	-	-	-	-	-
Springfield, . . . . .	29	343	42	32	199	162 09	79 75	2,745-2	9-14	2	56	1,225	476	172	9-14	78,740 93
Tolland, . . . . .	-	2	-	1	-	-	37 00	17-18	8-19	-	-	-	-	-	-	-
Wales, . . . . .	2	2	-	1	1	41 00	40 00	35	8-15	-	-	-	-	-	-	-
Westfield, . . . . .	7	65	9	3	50	169 40	56 00	512-1	9-9	1	11	275	100	28	9-16	16,000 00
West Springfield, . . . . .	5	42	5	27	27	98 95	47 70	389-10	9-5	1	6	191	75	19	9-16	7,804 82
Wilbraham, . . . . .	-	13	-	1	10	-	42 96	117	9	-	-	-	-	-	-	-
Totals, . . . . .	72	894	101	55	537	\$141 27	\$62 20	7,426-1	9-10	11	126	2,795	1 042	373	9-14	\$164,752 22

1 Powers Institute.

2 Deerfield Academy and Dickinson High School.

3 Hitchcock Free Academy.

4 Monson Academy.

## FRANKLIN COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							School sundries.	Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.				
Ashfield, . . .	\$3,003 55	\$122 00	\$513 53	\$68 50	\$625 00	\$266 33	\$2 50	\$4,601 41	\$2,410 61	\$2,190 80	
Barnardston, . . .	3,406 00	524 20	389 42	72 00	360 00	344 19	133 60	5,229 41	2,637 68	2,591 73	
Buckland, . . .	4,623 00	355 64	496 76	40 00	450 00	279 84	60 76	6,306 00	2,768 62	3,537 38	
Charlemont, . . .	3,505 00	394 50	284 49	50 00	450 57	271 53	70 27	5,026 36	2,580 42	2,445 94	
Colrain, . . .	5,329 50	506 15	304 94	98 00	600 00	384 32	74 32	7,297 23	2,849 46	4,447 77	
Conway, . . .	3,929 00	382 00	732 34	80 00	602 91	178 75	71 90	5,976 90	1,943 63	4,033 27	
Deerfield, . . .	4,811 70	1,513 25	825 48	114 73	690 69	440 64	36 00	8,432 49	1,407 25	7,025 24	
Erving, . . .	3,443 08	474 50	799 11	52 75	552 64	235 49	92 45	5,650 02	2,280 27	3,369 75	
Gill, . . .	2,461 10	367 44	259 42	45 00	325 00	168 73	21 26	3,647 95	1,908 71	1,739 24	
Greenfield, . . .	27,192 10	1,786 60	6,060 01	90 00	1,383 00	2,288 80	1,518 36	40,818 87	1,029 75	39,789 12	
Hawley, . . .	1,812 00	113 25	96 42	18 05	286 97	220 95	39 58	2,587 22	1,778 50	808 72	
Heath, . . .	1,078 00	367 90	63 72	42 00	191 52	131 98	31 56	1,906 68	957 78	948 90	
Leverett, . . .	1,888 20	599 50	112 50	57 50	413 15	237 93	53 75	3,362 53	2,126 47	1,236 06	
Leyden, . . .	1,486 00	170 00	86 78	35 00	325 00	146 05	40 41	2,289 24	1,495 42	793 82	
Monroe, . . .	1,356 00	—	45 41	23 28	254 11	50 73	4 69	1,734 22	1,145 82	588 40	
Montague, . . .	20,062 67	2,828 21	4,998 36	101 00	1,800 00	2,380 10	1,141 81	33,312 15	615 27	32,696 88	
New Salem, . . .	3,214 12	287 30	214 58	—	587 43	44 71	15 00	4,363 14	2,266 83	2,096 31	
Northfield, . . .	4,082 60	428 00	600 31	6 27	650 00	330 44	111 59	6,209 21	1,626 37	4,582 84	
Orange, . . .	13,816 35	2,704 00	3,149 20	25 00	1,600 00	1,986 75	369 00	23,650 30	—	23,650 30	
Rowe, . . .	1,652 00	145 90	90 14	40 00	239 40	165 37	—	2,332 81	1,723 53	609 28	
Shelburne, . . .	5,271 00	423 45	715 32	51 00	450 00	281 62	76 31	7,268 70	2,327 69	4,941 01	
Shutesbury, . . .	1,177 20	510 77	45 86	45 00	236 84	98 85	20 88	2,135 40	1,385 87	749 53	

## SCHOOL RETURNS.

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## HAMPDEN COUNTY — CONTINUED.

Sunderland,	2,447 00	1,412 76	564 31	45 00	300 00	223 48	53 75	5,046 30	2,183 73	2,862 57
Warwick,	1,620 50	1,429 05	201 50	17 25	325 00	212 25	42 00	3,847 55	1,723 38	2,124 17
Wendell,	1,585 25	405 77	77 75	—	197 36	51 82	10 46	2,328 41	1,186 53	1,141 88
Whately,	2,835 75	648 00	183 81	102 50	227 52	223 96	40 20	4,261 74	1,929 00	2,332 74
Totals,	\$127,088 67	\$18,900 14	\$21,911 47	\$1,319 83	\$14,624 11	\$11,645 61	\$4,132 41	\$199,622 24	\$46,288 59	\$153,333 65

Agawam,	\$7,761 93	\$541 45	\$1,554 76	\$156 50	\$685 68	\$617 33	\$37 09	\$11,354 74	\$1,672 21	\$9,682 53
Blandford,	2,882 00	333 42	104 20	3 00	355 04	163 78	18 90	3,860 34	1,872 72	1,987 62
Brimfield,	2,474 70	256 00	250 85	39 75	450 00	244 25	7 00	3,722 55	1,534 54	2,188 01
Chester,	4,618 50	295 80	801 76	40 00	715 24	613 01	15 00	7,099 31	3,204 50	3,894 81
Chicopee,	45,873 25	1,780 00	10,481 31	350 00	2,000 00	3,028 52	1,387 48	64,900 56	103 50	64,797 06
East Longmeadow,	5,683 88	—	743 06	141 75	477 30	547 28	101 76	7,695 03	4,031 99	3,663 04
Granville,	2,779 90	281 80	245 89	48 00	450 00	191 37	311 49	4,308 45	1,992 12	2,316 33
Hampden,	2,315 10	55 08	312 13	108 50	319 62	242 58	33 07	3,386 08	1,795 89	1,590 19
Holland,	497 56	294 50	41 20	7 00	75 00	96 03	1 60	1,012 89	837 89	175 00
Holyoke,	143,182 31	569 50	26,333 67	4,750 00	2,866 56	12,050 05	9,906 41	199,658 50	—	199,658 50
Longmeadow,	4,220 40	300 00	599 20	11 40	210 71	300 00	75 99	5,717 70	1,719 82	3,997 88
Ludlow,	10,288 20	1,316 46	2,694 93	342 25	914 28	694 27	809 01	17,059 40	1,160 06	15,899 34
Monson,	11,565 47	530 95	1,461 82	140 00	1,050 00	935 33	149 28	15,832 85	2,760 50	13,072 35
Montgomery,	1,712 50	165 00	80 60	—	202 32	52 49	24 70	2,237 61	1,671 05	566 56
Palmer,	15,753 25	1,719 03	3,892 57	20 00	1,800 00	1,598 70	1,185 92	25,989 47	612 96	25,356 51
Russell,	3,382 37	352 30	341 42	9 60	384 16	278 92	10 40	4,759 17	1,604 97	3,154 20
Southwick,	4,099 00	—	349 00	94 00	500 00	5,327 23	28 00	5,327 23	2,830 57	2,496 66
Springfield,	301,572 61	944 52	59,552 24	8,839 63	6,200 00	37,196 81	9,919 15	424,224 96	6,320 88	417,904 08
Tolland,	627 50	493 00	31 85	46 00	212 50	83 52	452 31	1,946 68	1,288 75	657 93
Wales,	1,603 00	463 00	200 75	120 00	225 00	217 63	37 47	2,872 85	1,590 50	1,282 35
Westfield,	43,127 05	2,287 00	7,247 38	179 20	2,241 66	5,981 14	2,111 01	63,174 44	7,484 11	55,690 33
West Springfield,	25,452 58	502 25	5,918 01	15 95	1,700 00	2,342 94	551 48	36,483 21	2,730 12	33,753 09
Wilbraham,	5,844 76	9 50	1,424 89	108 25	759 43	856 80	28 45	9,032 08	2,122 92	6,909 16
Totals,	\$647,317 82	\$13,496 56	\$124,663 49	\$15,570 78	\$24,794 50	\$68,589 98	\$27,202 97	\$921,636 10	\$50,942 57	\$870,693 53

## FRANKLIN COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school purposes, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Ashfield, . . . . .	-	\$500 00	\$26 99	\$526 99	\$500 00	\$26 99	\$2,217 79	\$20,900 00	\$904 00	\$13 34
Barnardston, . . . . .	-	-	244 76	244 76	-	-	2,591 73	14,000 00	549 34	60 64
Buckland, . . . . .	-	-	21 92	13,939 10	-	244 76	3,782 14	-	-	61 71
Charlmont, . . . . .	\$13,342 18	75 00	346 95	595 97	-	13,939 10	16,385 04	3,600 00	101 28	47 06
Colrain, . . . . .	-	249 02	104 24	104 24	-	595 97	5,043 74	-	-	75 39
Conway, . . . . .	-	-	104 24	404 06	-	104 24	4,137 51	1,000 00	37 85	76 47
Deerfield, . . . . .	-	189 26	214 80	404 06	-	404 06	7,429 30	-	-	100 10
Erving, . . . . .	-	-	3 55	3 55	-	3 55	3,373 30	-	-	56 35
Gill, . . . . .	-	150 00	22 76	172 76	163 00	9 76	1,749 00	3,500 00	163 00	4 00
Greenfield, . . . . .	-	-	1,198 38	1,198 38	-	1,198 38	40,987 50	-	-	-
Hawley, . . . . .	-	-	96 89	96 89	-	96 89	905 61	328 50	18 67	26 18
Heath, . . . . .	-	-	30 27	30 27	-	30 27	979 17	-	-	-
Leverett, . . . . .	-	162 45	27 89	190 34	-	190 34	1,426 40	-	-	-
Leyden, . . . . .	-	-	6 18	6 18	6 18	-	793 82	-	-	-
Monroe, . . . . .	-	-	11 60	11 60	-	-	600 00	-	-	-
Montague, . . . . .	5,000 00	200 00	1,603 12	6,803 12	-	11 60	39,500 00	-	-	-
New Salem, . . . . .	-	-	28 80	1,440 45	-	6,803 12	2,096 31	-	-	44 72
Northfield, . . . . .	-	1,411 65	-	1,440 45	-	-	6,023 29	-	-	176 54
Orange, . . . . .	-	-	689 60	689 60	-	1,440 45	24,339 90	-	-	-
Rowe, . . . . .	-	-	-	-	-	689 60	609 28	200 00	8 08	30 34
Shelburne, . . . . .	-	-	316 99	316 99	-	316 99	5,255 00	14,000 00	500 00	53 22
Shutesbury, . . . . .	-	-	34 33	34 33	27 56	6 77	756 30	-	-	27 56

## HAMPDEN COUNTY — CONTINUED.

Sunderland,	.	.	220 74	16 25	236 99	—	236 99	3,099 56	—	—	—
Warwick,	.	.	—	—	—	—	—	2,124 17	500 00	20 00	—
Wendell,	.	.	—	57 81	57 81	—	57 81	1,199 69	1,340 00	27 00	—
Whately,	.	.	—	32 78	32 78	—	32 78	2,365 52	—	—	—
Totals,	.	.	\$3,158 12	\$5,136 86	\$27,137 16	\$696 74	\$26,440 42	\$179,774 07	\$59,368 50	\$2,329 22	\$883 62

Agawam,	.	.	\$141 45	\$43 53	\$184 98	—	\$184 98	\$9,867 51	\$4,995 86	\$180 81	\$156 71
Blandford,	.	.	—	77 86	77 86	—	77 86	2,065 48	—	—	—
Brimfield,	.	.	—	59 64	59 64	—	59 64	2,247 65	393 24	—	162 14
Chester,	.	.	250 00	481 99	731 99	—	731 99	4,626 80	—	—	—
Chicopee,	.	.	441 96	3,048 49	3,490 45	—	3,490 45	68,287 51	—	—	—
East Longmeadow,	.	.	275 00	591 82	866 82	—	866 82	4,539 86	731 00	25 79	162 87
Granville,	.	.	—	120 67	120 67	—	120 67	2,437 00	—	—	78 87
Hamden,	.	.	171 01	—	171 01	—	171 01	1,761 20	—	—	115 15
Holland,	.	.	—	22 42	22 42	\$8 92	13 50	188 50	222 22	8 92	9 14
Holyoke,	.	.	9,856 78	—	53,805 81	—	53,805 81	253,464 31	—	—	2,401 14
Longmeadow,	.	.	449 72	31 52	481 24	—	481 24	4,479 12	—	—	—
Ludlow,	.	.	219 80	367 94	33,377 61	—	33,377 61	49,276 95	—	—	231 73
Monson,	.	.	110 00	1,040 74	1,150 74	—	1,150 74	14,223 09	—	—	537 51
Montgomery,	.	.	168 31	27 82	194 13	—	194 13	760 69	—	—	30 62
Palmer,	.	.	150 00	382 45	532 45	—	532 45	25,888 96	850 00	29 99	641 67
Russell,	.	.	—	83 39	883 39	—	883 39	4,037 59	—	—	33 19
Southwick,	.	.	140 42	221 60	221 60	—	221 60	2,718 26	—	—	163 39
Springfield,	.	.	9,367 11	12,779 68	235,643 68	—	235,643 68	653,547 76	15,618 03	763 94	—
Tolland,	.	.	—	8 85	8 85	—	8 85	666 78	—	—	53 57
Wales,	.	.	—	26 10	26 10	—	26 10	1,308 45	—	—	102 83
Westfield,	.	.	500 00	2,508 57	3,008 57	—	3,008 57	58,698 90	—	—	—
West Springfield,	.	.	1,808 89	554 49	3,663 38	—	3,663 38	37,416 47	14,339 05	748 12	—
Wilbraham,	.	.	—	324 21	324 21	—	324 21	7,233 37	1,368 40	78 50	207 00
Totals,	.	.	\$23,989 21	\$22,722 60	\$339,047 60	\$8 92	\$339,038 68	\$1,209,732 21	\$38,457 80	\$1,836 07	\$5,090 53

## BOARD OF EDUCATION.

## FRANKLIN COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		FUNDS WHOSE INCOME MUST BE APPROPRIATED TO ACADEMIES OR PRIVATE SCHOOLS.	
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.	Principal.	Income.
Ashfield, .	\$856 51	\$520 00	1							
Barnardston, .	1,427 50									
Buckland, .	995 62									
Charlensont, .	1,131 50									
Colrain, .	995 62									
Conway, .	995 62									
Deerfield, .	845 62								\$52,483 68	\$2,453 95
Erving, .	995 62									
Gill, .	1,195 62		1	732			\$18,014 00		928,763 00	15,549 00
Greenfield, .	—									
Hawley, .	1,038 75									
Heath, .	1,195 62									
Leverett, .	1,195 63									
Leyden, .	1,195 63									
Monroe, .	1,131 50									
Montague, .	—				1	237				
New Salem, .	1,270 63								2,500 00	125 00
Northfield, .	706 50		1	426			35,481 68		759,124 97	17,336 80
Orange, .	—									
Rowe, .	1,131 50									
Shelburne, .	706 50									
Shutesbury, .	1,056 50						4,864 00		48,632 09	1,536 38



## SCHOOL RETURNS.

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Sunderland, . . . . .	1,195 63	-	-	-	-	-	-	-	-	-	-	-
Warwick, . . . . .	1,270 63	-	-	-	-	-	-	-	-	-	-	-
Wendell, . . . . .	575 00	-	-	-	-	-	-	-	-	-	-	-
Whately, . . . . .	1,195 63	-	-	-	-	-	-	-	-	-	-	-
Totals, . . . . .	\$24,304 88	\$530 00	2	1,158	1	237	\$88,359 68	-	\$1,791,503 74	\$27,001 13	-	-

## HAMPDEN COUNTY — CONCLUDED.

Agawam, . . . . .	\$1,077 51	\$315 67	-	-	2	84	-	\$600 00	-	-	-	-
Blandford, . . . . .	1,056 50	-	-	-	-	-	-	-	-	\$92,039 94	\$5,295 33	-
Brimfield, . . . . .	1,195 62	-	-	-	-	-	-	-	-	-	-	-
Chester, . . . . .	1,227 50	-	-	-	4	1,313	-	-	-	-	-	-
Chicopee, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
East Longmeadow, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Granville, . . . . .	1,270 62	-	-	-	-	-	-	-	-	-	-	-
Hampden, . . . . .	1,195 82	-	-	-	-	-	-	-	-	-	-	-
Holland, . . . . .	500 00	-	-	-	-	-	-	-	-	-	-	-
Holyoke, . . . . .	-	-	-	-	8	4,889	-	3,600 00	-	-	-	-
Longmeadow, . . . . .	845 63	25 00	-	-	1	22	-	-	-	-	-	-
Ludlow, . . . . .	-	-	-	-	1	33	-	-	-	-	-	-
Monson, . . . . .	1,077 50	8 20	1 <sup>1</sup>	121	1	9	\$2,718 50	325 00	106,006 00	5,122 75	-	-
Montgomery, . . . . .	1,195 63	-	-	-	2	246	-	-	-	-	-	-
Palmer, . . . . .	-	60 00	-	-	-	-	-	-	-	-	-	-
Russell, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Southwick, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Springfield, . . . . .	-	765 78	-	-	6	2,173	-	15,000 00	205,600 00	-	-	-
Tolland, . . . . .	1,038 75	-	-	-	-	-	-	-	-	-	-	-
Wales, . . . . .	1,195 63	-	-	-	1	290	-	-	-	-	-	-
Westfield, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
West Springfield, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Wilbraham, . . . . .	1,077 50	-	1	120	-	-	7,650 00	-	60,000 00	1,200 00	-	-
Totals, . . . . .	\$17,172 77	\$1,174 65	2	241	26	9,059	\$10,368 50	\$19,525 00	\$463,645 94	\$11,618 08	-	-

<sup>1</sup> United with high school.

## BOARD OF EDUCATION.

## HAMPSHIRE COUNTY.

TOWNS AND CITIES.	Population — State Census of 1905.	Valuation — May 1, 1906.	No. of public schools.	School Census Data Sept. 1, 1906.		School Membership, Attendance and Graduation Data for the School Year.						
				No. of persons in towns between 5 and 15 years of age.	No. of persons in towns between 7 and 14 years of age.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.
Amherst, . . .	5,313	\$3,628,217	18	772	551	917	183	579	822	780	.94	54
Belchertown, . . .	2,088	864,810	19	354	267	469	50	332	392	356	.91	16
Chesterfield, . . .	563	302,320	7	93	65	100	11	63	76	69	.91	6
Cummington, . . .	740	310,977	8	135	106	138	4	118	132	125	.95	8
Easthampton, . . .	6,808	3,944,195	29	1,194	836	1,237	64	884	1,125	1,050	.90	37
Enfield, . . .	973	683,190	7	192	134	192	2	134	165	149	.90	13
Goshen, . . .	277	164,010	4	68	52	61	1	47	51	46	.90	3
Granby, . . .	747	486,641	6	119	87	160	20	102	141	130	.92	7
Greenwich, . . .	475	277,260	2	68	56	63	—	46	52	50	.97	8
Hadley, . . .	1,895	1,155,885	11	305	212	302	45	216	276	255	.92	21
Hatfield, . . .	1,779	1,453,988	9	263	186	263	—	186	244	223	.92	9
Huntington, . . .	1,451	583,180	11	298	209	374	43	239	320	294	.92	20
Middlefield, . . .	399	189,585	6	101	75	148	1	104	108	100	.92	3
Northampton, . . .	19,957	12,804,015	78	3,107	2,258	3,134	342	1,942	2,831	2,673	.94	125
Pelham, . . .	460	197,680	4	100	68	102	3	76	73	65	.88	1
Plainfield, . . .	382	178,467	5	60	43	84	1	66	63	56	.89	4
Prescott, . . .	322	181,024	5	54	38	58	2	45	51	42	.84	2

Southampton,	927	492,772	8	167	130	179	2	6	139	147	129	.88	10
South Hadley,	5,054	2,553,779	24	862	621	996	26	70	636	863	799	.93	34
Ware, .	8,594	4,436,055	30	1,540	1,112	1,204	6	105	799	1,047	984	.94	36
Westhampton,	466	222,640	5	120	92	112	1	1	92	93	85	.92	9
Williamsburg,	1,943	914,708	14	384	285	414	-	36	277	377	352	.93	14
Worthington,	614	315,618	7	110	75	127	-	6	91	112	93	.83	3
Totals, .	62,227	\$36,351,016	317	10,466	7,558	10,834	221	997	7,213	9,561	8,905	.93	440

## BOARD OF EDUCATION.

## HAMPSHIRE COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.				LENGTH OF SCHOOLING.				HIGH SCHOOLS.							
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
	Men.	Women.	In high schools.	In elementary schools.												
Amherst, . . . . .	3	21	6	1	8	\$115 00	\$44 32	160-5	8-19	1	6	174	52	28	9-11	\$6,200 00
Belchertown, . . . . .	1	19	4	-	3	73 05	44 15	152-13	8	1	2	83	16	10	9	1,902 75
Chesertown, . . . . .	1	6	1	-	1	36 00	34 80	58-10	8-7	1	1	14	2	-	8-10	475 00
Cummington, . . . . .	1	7	-	-	1	40 00	35 81	67-5	8-8	-	-	-	-	-	-	-
Easthampton, . . . . .	1	31	4	11	5	150 00	43 04	258-6	8-18	1	4	71	16	13	9-16	3,500 00
Enfield, . . . . .	-	7	-	1	2	-	40 03	63	9	-	-	-	-	-	-	-
Goshen, . . . . .	-	4	-	-	1	-	34 72	33	8-5	-	-	-	-	-	-	-
Granby, . . . . .	1	6	2	1	-	80 00	35 00	54-13	9-2	1	2	26	6	4	10	1,441 63
Greenwich, . . . . .	-	2	-	-	2	-	44 66	17-6	8-3	-	-	-	-	-	-	-
Hadley, . . . . .	-	13	3	-	4	-	40 00	97-11	8-7	1	3	43	19	7	9-15	2,410 00
Hartford, . . . . .	-	9	-	2	4	-	39 12	81	8-17	-	-	-	-	-	-	-
Huntington, . . . . .	1	12	3	-	7	84 00	37 41	100-5	9-2	1	4	79	32	11	9-15	2,514 00
Middlefield, . . . . .	-	6	-	-	3	-	36 00	49-5	8-4	-	-	-	-	-	-	-
Northampton, . . . . .	6	92	14	3	44	128 00	47 80	758-18	9-14	1	14	369	139	52	9-14	15,727 04
Pelham, . . . . .	-	4	-	2	1	-	36 00	35-4	8-16	-	-	-	-	-	-	-
Plainfield, . . . . .	-	5	-	-	7	-	33 60	39-5	7-17	-	-	-	-	-	-	-
Prescott, . . . . .	3	4	-	2	1	34 00	33 50	40-16	8-3	-	-	-	-	-	-	-

### SCHOOL RETURNS.

[illegible]<sup>11</sup> Hopkins Academy.

<sup>2</sup> Also three teachers on part time.

3

300

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## HAMPSHIRE COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and transient service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Amherst, . . . . .	\$12,259 09	\$913 10	\$1,737 77	\$165 00	\$1,500 00	\$1,375 56	\$767 97	\$18,718 49	\$2,261 79	\$16,456 70
Belchertown, . . . . .	6,135 46	50 00	505 15	185 70	1,080 00	536 88	94 05	8,587 24	2,628 58	5,958 66
Chesherfield, . . . . .	1,937 65	276 90	142 00	32 15	375 00	140 15	21 90	2,925 75	1,672 77	1,252 98
Cummington, . . . . .	2,820 00	158 50	233 10	56 00	375 00	94 24	25 50	3,762 34	2,389 44	1,372 90
Easthampton, . . . . .	14,904 66	732 50	2,800 91	109 98	1,100 83	1,253 39	250 42	21,152 69	976 54	20,176 15
Enfield, . . . . .	3,031 50	309 40	562 97	115 00	420 00	440 84	10 00	4,889 71	2,135 50	2,754 21
Goshen, . . . . .	1,196 50	—	59 50	13 00	187 50	78 17	6 07	1,540 74	826 25	714 49
Granby, . . . . .	2,574 80	920 50	365 01	85 50	343 75	260 48	395 42	4,945 46	2,336 12	2,609 34
Greenwich, . . . . .	1,270 10	468 50	54 55	40 00	182 55	110 17	24 34	2,150 21	1,695 11	455 10
Hadley, . . . . .	5,390 14	611 32	1,085 48	2 25	660 00	666 38	170 40	8,585 97	3,529 12	5,056 85
Hatfield, . . . . .	4,581 50	43 00	873 20	74 75	480 00	449 83	100 34	6,602 62	1,913 60	4,689 02
Huntington, . . . . .	5,257 75	366 95	530 07	3 50	557 93	616 82	143 53	7,476 55	2,679 51	4,797 04
Middlefield, . . . . .	1,853 00	153 00	113 50	—	293 41	175 02	160 08	2,748 01	2,072 70	675 31
Northampton, . . . . .	53,394 15	900 50	10,547 08	\$24 14	2,000 00	4,978 16	1,404 07	74,048 10	3,379 45	70,668 65
Pelham, . . . . .	1,626 00	78 00	72 00	—	300 00	54 49	28 57	2,159 06	1,250 00	909 06
Plainfield, . . . . .	1,321 80	—	93 15	8 00	312 50	134 52	24 13	1,894 10	1,394 62	499 48
Prescott, . . . . .	1,081 50	331 00	109 95	26 00	343 26	22 34	59 16	2,573 21	1,218 27	1,354 94

## SCHOOL RETURNS.

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Southampton,	3,034 80	—	389 41	70 00	137 47	122 15	—	3,753 83	1,794 44	1,959 39
South Hadley,	13,486 79	482 25	3,321 94	100 00	1,125 00	1,636 73	843 53	20,996 24	1,047 02	19,949 22
Ware,	18,869 99	1,194 04	6,026 72	—	2,000 00	2,242 05	1,566 54	31,899 34	291 36	31,607 98
Westhampton,	2,306 80	—	109 15	34 75	140 35	58 53	33 91	2,683 49	1,383 49	1,300 00
Williamsburg,	5,394 45	458 00	969 95	236 50	750 00	477 10	187 46	8,473 46	3,215 41	5,258 05
Worthington,	2,252 00	79 60	171 64	75 00	375 00	213 14	52 12	3,218 50	1,839 63	1,378 87
Totals,	\$166,580 43	\$8,527 06	\$30,874 20	\$2,257 22	\$15,039 55	\$10,137 14	\$6,369 51	\$245,785 11	\$43,930 72	\$201,854 39

HAMPSHIRE COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school purposes, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Amherst, . . . . .	—	—	\$789 39	\$789 39	—	\$789 39	\$17 246 09	—	—	\$487 80
Belchertown, . . . . .	—	—	232 11	232 11	—	232 11	6 190 77	\$6,000 00	\$242 40	—
Chesterfield, . . . . .	—	—	6 94	6 94	—	6 94	1 259 92	500 00	27 65	—
Cummington, . . . . .	—	—	29 54	29 54	\$29 54	—	1 372 90	—	—	99 51
Easthampton, . . . . .	—	\$82 00	654 97	736 97	—	736 97	20 913 12	—	—	416 25
Enfield, . . . . .	—	—	146 54	146 54	—	146 54	2 900 75	—	—	—
Goshen, . . . . .	—	—	30 70	30 70	—	30 70	745 19	—	—	—
Granby, . . . . .	—	—	119 80	119 80	—	119 80	2 729 14	—	—	—
Greenwich, . . . . .	—	—	44 90	44 90	—	44 90	500 00	—	—	—
Hadley, . . . . .	—	762 28	201 43	963 71	—	963 71	6 020 56	—	—	—
Hatfield, . . . . .	\$1,614 49	—	209 77	1,824 26	209 77	1,614 49	6 303 51	—	—	145 70
Huntington, . . . . .	—	—	199 42	199 42	—	199 42	4 996 46	—	—	67 30
Middlefield, . . . . .	—	35 76	70 27	106 03	—	106 03	781 34	—	—	—
Northampton, . . . . .	7,500 00	6,598 16	5,339 26	19,437 42	—	19,437 42	90,106 07	3,000 00	113 54	1,306 54
Pelham, . . . . .	—	—	76 41	76 41	—	76 41	985 47	—	—	58 61
Plainfield, . . . . .	—	—	4 35	4 35	4 35	—	499 48	—	—	—
Prescott, . . . . .	—	—	25 40	25 40	—	25 40	1,380 34	—	—	—



## SCHOOL RETURNS.

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Southampton,	.	160 88	—	160 88	—	160 88	2,120 27	—	—	132 82
South Hadley,	.	900 88	377 15	1,278 03	—	1,278 03	21,227 25	—	—	388 89
Ware,	.	348 06	1,002 70	1,350 76	—	1,350 76	32,958 74	—	—	—
Westhampton,	.	280 81	74 10	354 91	—	354 91	1,654 91	—	—	—
Williamsburg,	.	386 08	522 16	908 24	—	908 24	6,166 29	14,104 00	650 71	175 92
Worthington,	.	—	237 89	237 89	—	237 89	1,616 76	—	—	321 67
Totals,	.	\$9,114 49	\$10,395 20	\$29,064 60	\$243 66	\$28,820 94	\$230,675 33	\$23,604 00	\$1,034 30	\$3,601 01



### SCHOOL RETURNS.

Southampton,	.	.	1,056	50	-	-	-	-	-	-	-	-
South Hadley,	.	.	-	-	-	-	-	-	-	-	-	-
Ware,	.	.	-	-	-	-	1	402	-	-	-	-
Westhampton,	.	.	1,427	50	-	-	-	-	-	-	-	-
Williamsburg,	.	.	995	63	-	-	-	-	-	-	-	-
Worthington,	.	.	1,195	63	-	-	-	-	-	-	-	-
Totals,	.	.	\$19,243	74	-	3	409	6	1,146	\$26,300	\$150	\$77,980 47

# BOARD OF EDUCATION.

## MIDDLESEX COUNTY.

TOWNS AND CITIES.	Population — State Census of 1905.	Valuation — May 1, 1906.	No. of public schools.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.								
				No. of persons in towns be- tween 5 and 15 years of age.	No. of persons in towns be- tween 7 and 14 years of age.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.		
Acton, .	2,089	\$1,816,845	10	336	248	349	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.
Arlington, .	9,668	10,340,490	44	1,773	1,294	1,930		—	279	248	319	293	.92	26
Ashby, .	865	490,995	4	128	76	133		—	20	1,114	1,719	1,614	.94	76
Ashland, .	1,597	1,055,604	9	298	220	314		2	42	208	303	287	.95	21
Ayer, .	2,386	1,916,440	10	447	329	509		—	66	352	472	437	.93	31
Bedford, .	1,208	1,254,659	4	190	132	164		—	2	125	143	133	.93	18
Belmont, .	4,360	5,722,165	20	815	597	853		—	78	500	817	766	.94	39
Billerica, .	2,843	2,194,026	16	506	362	525		5	36	372	462	421	.91	13
Boxborough, .	324	238,615	4	56	40	48		—	—	36	43	40	.94	2
Burlington, .	588	590,062	3	59	47	65		2	2	36	60	56	.95	5
Cambridge, .	97,434	105,153,235	322	15,929	11,316	16,056		967	1,591	9,946	14,907	13,855	.93	713
Carlisle, .	523	421,280	3	98	63	100		—	1	78	80	73	.92	2
Chelmsford, .	4,254	3,153,080	25	795	579	832		7	63	585	750	685	.91	26
Concord, .	5,421	5,679,325	19	883	613	1,136		—	216	599	1,034	978	.95	47
Dracut, .	3,537	2,181,183	16	643	469	636		3	2	445	510	460	.90	33
Dunstable, .	412	283,701	3	85	67	97		—	5	70	73	65	.89	1
Everett, .	29,111	23,006,700	133	5,689	4,492	6,857		50	596	4,656	6,187	5,885	.95	348
Frammingham, .	11,548	9,785,514	53	1,892	1,528	2,240		18	237	1,450	2,044	1,905	.93	121
Groton, .	2,253	2,982,902	11	341	246	392		3	55	239	360	328	.91	30
Holliston, .	2,663	1,541,196	13	427	325	560		—	32	372	479	453	.94	27

## SCHOOL RETURNS.

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Hopkinton, . . . . .	2,585	1,609,600	13	403	300	440	5	42	292	407	389	.96	18
Hudson, . . . . .	6,217	3,249,856	20	1,065	751	1,118	6	90	754	1,042	967	.93	80
Lexington, . . . . .	4,530	6,153,180	20	805	548	973	1	118	579	865	793	.92	41
Lincoln, . . . . .	1,122	2,809,915	5	137	90	115	1	5	87	102	95	.93	4
Littleton, . . . . .	1,219	997,127	7	214	156	234	—	—	158	207	193	.93	12
Lowell, . . . . .	94,889	74,258,565	266	13,964	10,356	12,644	655	1,062	8,498	10,962	9,991	.91	444
Malden, . . . . .	38,037	32,988,750	139	7,476	4,869	7,226	3	804	4,786	6,393	5,952	.93	365
Marlborough, . . . . .	14,073	9,803,330	61	2,964	2,058	2,521	38	251	2,058	2,286	2,102	.92	114
Maynard, . . . . .	5,811	3,606,849	18	742	525	863	2	5	612	769	714	.93	48
Medford, . . . . .	19,686	21,756,800	89	3,869	2,733	4,481	98	438	2,897	3,941	3,629	.92	221
Melrose, . . . . .	14,295	15,477,880	67	2,856	1,983	3,140	52	453	1,916	2,955	2,793	.95	207
Natick, . . . . .	9,609	6,634,850	40	1,644	1,148	1,858	—	246	1,137	1,743	1,648	.95	108
Newton, . . . . .	36,827	65,967,040	155	6,521	4,683	6,859	299	1,035	3,601	6,012	5,519	.92	301
North Reading, . . . . .	903	669,769	4	150	109	155	4	1	91	121	110	.91	10
Pepperell, . . . . .	3,268	2,236,960	18	611	449	787	7	53	518	683	625	.92	27
Reading, . . . . .	5,682	4,818,545	21	1,022	759	1,211	18	193	754	1,127	1,031	.92	81
Sherborn, . . . . .	1,379	1,310,941	7	222	191	194	2	3	147	191	179	.94	15
Shirley, . . . . .	1,692	968,648	7	302	240	307	8	24	186	274	255	.93	7
Somerville, . . . . .	69,272	60,275,660	242	12,068	8,714	12,490	197	1,481	7,715	11,710	11,070	.95	640
Stoughton, . . . . .	6,332	4,853,830	25	1,035	746	1,233	4	151	777	1,093	1,036	.95	61
Stow, . . . . .	1,027	856,122	6	204	141	198	—	13	117	167	157	.93	9
Sudbury, . . . . .	1,159	1,232,074	7	178	143	196	3	27	119	173	159	.92	13
Tewksbury, . . . . .	4,415	985,246	7	215	163	229	2	5	164	182	161	.88	13
Townsend, . . . . .	1,772	1,158,349	9	255	183	311	—	43	191	279	261	.94	17
Tyngsborough, . . . . .	768	491,577	5	119	92	136	—	3	110	116	105	.90	4
Wakefield, . . . . .	26,282	8,355,689	49	1,973	1,422	2,540	15	293	1,477	2,070	1,966	.95	110
Waltham, . . . . .	10,268	23,795,456	74	3,844	2,738	3,257	22	512	2,028	3,047	2,824	.93	185
Watertown, . . . . .	11,258	12,745,677	37	1,925	1,519	1,636	10	292	1,010	1,552	1,448	.93	83
Wayland, . . . . .	2,220	1,970,927	12	337	246	412	5	80	244	382	354	.93	30
Westford, . . . . .	2,413	1,648,119	15	407	383	465	48	330	182	282	263	.86	11
Weston, . . . . .	2,091	5,660,711	7	293	214	297	—	44	276	349	322	.93	24
Wilmington, . . . . .	1,670	1,248,787	11	347	254	408	4	51	276	349	322	.92	29
Winchester, . . . . .	8,242	10,717,600	36	1,517	1,077	2,030	92	230	1,287	1,479	1,479	.92	74
Woburn, . . . . .	14,402	10,698,310	59	3,350	2,117	3,008	23	234	1,960	2,776	2,572	.93	105
Totals, . . . . .	608,499	\$81,822,756	2,283	104,424	75,173	107,768	2,638	11,622	68,592	97,149	90,346	.93	5,096

## MIDDLESEX COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.				LENGTH OF SCHOOLING.		HIGH SCHOOLS.									
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
	Men.	Women.	In high schools.	In elementary schools.												
Acton, . . . . .	1	10	2	-	6	\$100 00	\$48 31	95	9-10	1	2	27	23	3	10	\$1,861 12
Arlington, . . . . .	3	55	7	2	31	153 33	62 80	418	9-10	1	11	274	74	35	9-10	15,467 81
Ashby, . . . . .	1	4	2	-	2	70 00	42 00	34-3	8-11	1	2	21	13	-	9-15	1,480 96
Ashland, . . . . .	1	10	3	-	5	100 00	45 85	78-3	8-10	1	2	49	19	9	9-12	2,500 00
Ayer, . . . . .	1	12	4	1	7	120 00	46 41	94-10	9-9	1	4	84	37	20	9-15	3,405 25
Bedford, . . . . .	-	4	-	-	3	-	49 16	37-12	9-8	-	-	-	-	-	-	-
Belmont, . . . . .	1	23	5	1	10	150 00	59 87	183-10	9-5	1	5	106	35	8	9-5	5,591 45
Billerica, . . . . .	2	16	3	1	5	90 00	43 62	145-1	9-1	1	3	55	14	10	9-14	2,616 79
Boxborough, . . . . .	-	4	-	-	2	-	38 00	36	9	-	-	-	-	-	-	-
Burlington, . . . . .	-	3	-	-	1	-	42 67	28-10	9-10	-	-	-	-	-	-	-
Cambridge, . . . . .	49	406	50	20	251	164 25	71 35	3,091	9-12	3	72	1,668	683	178	9-14 9-14 9-14	109,471 16
Carlisle, . . . . .	-	3	-	-	-	-	38 66	26-17	8-19	-	-	-	-	-	-	-
Chelmsford, . . . . .	2	25	5	4	13	97 50	43 12	231-17	9-5	2	4	60	23	13	9-16 9-16	3,395 00
Concord, . . . . .	5	29	11	2	11	122 00	64 14	175-18	9-5	1	11	336	86	65	9-7	14,789 98
Dracut, . . . . .	-	17	-	1	10	-	45 77	147-11	9-4	-	-	-	-	-	-	-
Dunstable, . . . . .	-	3	-	1	1	-	39 32	26-11	8-17	-	-	-	-	-	-	-
Everett, . . . . .	11	161	13	1	90	145 50	60 62	1,214-9	9-2	1	17	503	216	57	9-10	23,038 93
Frammingham, . . . . .	5	59	7	3	41	130 20	53 59	484-6	9-2	1	9	287	124	34	9-13	13,089 94
Groton, . . . . .	1	13	3	-	4	155 00	44 38	98-17	8-19	1	3	75	31	11	9-7	3,442 00
Holliston, . . . . .	1	14	3	-	7	93 26	45 86	111-6	8-14	1	3	65	25	7	9-13	2,484 65

## SCHOOL RETURNS.

lv

	15	1	4	46 73	113-16	8-15	1	3	55	26	7	9-12	2,800 00
Hopkinton,	3	6	8	106 16	44 94	188-5	1	7	182	77	23	9-13	7,735 00
Hudson,	2	5	8	131 00	59 00	185-3	1	5	107	44	20	9-7	6,397 67
Lexington,													
Lincoln,	5	3	2	-	53 94	47-10	-	-	-	-	-	-	-
Littleton,	8	3	5	100 00	47 00	64	1	3	39	13	6	10	2,231 27
Lowell,	23	13	114	185 00	62 00	9-5	1	35	1,019	366	207	9-11	53,268 71
Malden,	19	16	94	162 25	76 27	1,293-16	1	27	745	293	107	8-19	33,906 45
Marlborough,	5	6	13	102 00	60 11	583-1	1	11	332	86	26	9-15	12,670 00
Maynard,	1	5	13	120 00	52 63	170-18	1	5	65	26	11	9-17	3,950 00
Medford,	16	14	29	141 54	63 80	817-2	1	18	523	187	62	9-9	25,036 16
Melrose,	8	16	42	125 56	55 54	636-10	1	17	469	163	72	9-10	18,559 95
Natick,	6	9	25	116 58	55 62	365-16	1	10	270	92	22	9-13	9,850 00
Newton,	20	32	138	193 88	69 70	1,426	1	35	945	310	194	9-2	59,711 31
North Reading,						36-8	-	-	-	-	-	-	-
Pepperell,	4	-	2	-	46 00	9-4	1	4	110	32	17	9-16	3,336 07
Reading,	1	4	8	112 00	41 77	155-12	1	10	267	89	45	9-13	12,377 70
Shirley,	2	10	17	145 00	52 75	186-15	1	2	27	11	-	8-10	1,189 82
Sherborn,	6	2	5	-	49 22	62-10	1 <sup>2</sup>	2	20	7	2	10	1,089 50
Somerville,	8	46	164	172 59	69 28	67-18	1	54	1,424	569	208	9-10	63,908 08
Stonham,	29	7	14	175 00	51 63	228-5	2	5	139	51	26	9-10	6,500 00
Stow,	1	7	4	80 00	40 00	54-10	1	2	28	12	3	9-10	1,248 40
Sudbury,	1	2	5	80 00	44 57	63-2	1	2	23	11	5	9-18	1,451 08
Tewksbury,	7	-	3	-	44 57	65-9	-	-	-	-	-	-	-
Townsend,	1	3	4	80 00	41 20	79-6	1	3	63	28	2	9-14	2,062 30
Tyngsborough,	5	-	4	-	45 90	76-4	1	-	-	-	-	-	-
Wakefield,	58	7	27	115 07	52 72	448-1	1	11	332	121	57	9-11	13,214 80
Waltham,	9	12	45	154 28	63 73	697	1	16	426	178	62	9-7	24,763 46
Watertown,	5	7	18	151 28	62 80	355	1	8	200	72	26	9-14	9,546 18
Wayland,	2	6	11	89 39	42 40	109-9	1	3	74	25	19	9-1	4,046 98
Westford,	2	2	10	99 44	44 89	144-15	1 <sup>3</sup>	2	24	10	4	9-15	2,200 00
Weston,	1	4	203	57 60	77	65-10	1	4	56	22	8	9-10	5,225 00
Wilmington,	1	4	4	100 00	43 48	97-4	1	3	57	29	4	9-13	2,021 00
Winchester,	6	6	20	161 67	63 21	351-5	1	8	241	76	33	10	11,650 00
Woburn,	5	8	14	134 00	55 39	527	1	11	289	113	60	9-7	11,904 89
Totals,	256	2,726	1,383	\$153 52	\$62 53	21,263-14	48	373	12,161	4,542	1,788	9-11	\$616,486 82

<sup>1</sup> Howe Academy.<sup>2</sup> United with Sawin Academy.<sup>3</sup> Westford Academy.

## MIDDLESEX COUNTY --- CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truancy service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Action.	\$6,102 00	\$1,420 00	\$1,132 09	\$106 00	\$480 00	\$840 89	\$116 89	\$10,197 87	\$1,253 36	\$8,944 51
Arlington.	39,538 24	-	7,986 39	200 00	2,440 00	4,233 78	1,960 77	56,359 18	235 77	56,123 41
Ashby.	2,447 00	1,468 34	467 37	-	340 00	153 86	10 00	4,886 57	1,839 66	3,046 91
Ashland.	5,632 98	986 85	1,362 20	70 00	600 00	499 27	76 01	9,227 31	2,229 77	6,997 54
Ayer.	6,785 75	85 00	1,739 60	-	756 25	944 91	326 03	10,637 54	1,569 99	9,067 55
Bedford.	4,253 31	915 60	768 28	-	450 00	160 15	102 23	6,649 60	1,971 00	4,678 60
Belmont.	16,245 75	175 00	4,467 90	5 15	1,500 00	1,664 80	546 51	24,605 11	407 16	24,197 95
Billerica.	6,276 00	784 00	2,146 19	940 52	750 00	754 26	512 41	12,163 38	1,428 12	10,735 26
Boxborough.	1,876 00	-	220 51	25 00	300 00	127 74	31 75	2,581 00	1,629 75	951 25
Burlington.	1,574 63	803 00	444 00	70 00	270 00	61 24	110 17	3,333 04	1,183 12	2,149 92
Cambridge.	377,444 92	348 00	60,945 39	8,284 00	4,800 00	24,792 05	4,546 27	481,160 63	6,858 31	474,302 32
Carlisle.	1,442 00	794 60	150 75	-	225 00	106 47	40 80	2,759 62	1,465 75	1,293 87
Chelmsford.	12,664 80	988 00	3,119 16	238 50	1,125 00	1,180 87	226 21	19,542 54	1,154 00	18,388 54
Concord.	23,919 86	3,288 50	3,660 81	211 25	700 00	2,247 67	3,000 21	37,028 30	6,605 91	30,422 39
Draught.	11,257 16	791 00	2,253 02	76 50	720 00	766 29	273 01	16,136 98	1,617 22	14,519 76
Dunstable.	1,093 60	1,040 00	368 21	-	150 00	50 25	52 30	2,754 36	1,442 10	1,312 26
Everett.	114,180 68	-	23,318 75	1,100 00	2,500 00	13,734 73	5,792 21	160,626 37	280 50	160,345 87
Frammingham.	37,283 40	2,023 25	7,324 52	165 64	2,000 00	3,577 38	2,405 72	54,779 91	729 54	54,050 37
Groton.	7,247 50	847 50	1,215 45	15 00	500 00	741 61	545 95	11,113 01	88 25	11,024 76
Holliston.	7,264 74	1,245 00	1,229 64	41 00	620 00	787 43	90 65	11,278 46	960 23	10,318 23



## SCHOOL RETURNS.

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Hopkinton,	7,117 00	741 90	1,862 11	16 00	900 00	681 96	260 59	11,579 56	2,034 56	9,545 00
Hudson,	14,634 35	861 97	4,165 74	200 14	1,080 00	1,302 14	482 06	22,726 40	383 83	22,342 57
Lexington,	17,903 50	2,661 75	5,053 03	140 00	630 00	1,707 69	274 79	28,370 76	617 15	27,753 61
Lincoln,	4,168 50	1,622 15	477 46	-	450 00	1,127 44	91 25	6,936 80	358 84	6,577 96
Littleton,	4,543 50	1,357 75	917 02	-	320 00	536 82	69 00	7,744 09	1,987 50	5,756 59
Lowell,	248,199 21	175 00	76,464 81	5,665 85	3,000 00	13,985 78	7,730 89	335,221 54	7,169 21	348,052 33
Malden,	149,423 20	-	23,318 76	1,666 00	2,600 00	5,526 94	14,153 03	196,687 93	205 50	196,482 43
Marlborough,	39,879 82	1,267 64	7,174 51	750 00	1,690 00	3,288 17	1,040 55	55,090 69	335 58	54,755 11
Maynard,	13,236 80	400 00	2,610 53	248 75	750 00	2,877 82	449 36	20,573 26	625 00	19,948 26
Medford,	86,041 45	-	16,320 78	1,900 00	2,800 00	6,599 44	3,065 01	116,726 68	216 00	116,510 68
Melrose,	57,207 65	522 00	10,523 62	470 00	2,135 00	5,441 45	1,829 48	78,129 20	-	78,129 20
Melrose,	31,161 17	526 63	6,355 27	81 50	2,200 00	2,134 19	2,645 80	45,104 56	578 25	44,526 31
Natick,	179,055 60	1,666 55	28,253 60	3,000 00	4,000 00	15,741 50	8,076 07	239,793 32	-	239,793 32
Newton,	3,130 54	966 50	525 62	53 80	180 00	96 04	80 59	5,033 09	2,380 63	2,652 46
North Reading,	9,626 50	786 15	2,595 20	167 70	750 00	765 16	456 12	15,146 83	1,627 50	13,519 33
Pepperell,	20,441 95	710 00	4,327 75	40 00	1,100 00	2,945 90	4,292 80	33,858 40	1,450 84	32,407 56
Reading,	2,495 75	1,147 00	420 06	11 50	300 00	283 40	41 22	4,678 93	1,357 63	3,321 30
Sherborn,	4,092 71	990 25	739 22	25 00	457 13	484 67	57 10	6,846 08	2,020 12	4,825 96
Shirley,	260,797 00	-	40,560 00	2,400 00	3,000 00	17,914 00	4,675 00	329,346 00	-	329,346 00
Stoneham,	20,274 85	222 20	4,359 94	134 94	1,000 00	1,561 37	1,334 52	28,887 82	202 64	28,685 18
Stow,	3,415 10	1,067 40	936 42	100 00	459 00	374 92	6 00	6,388 84	2,278 10	4,110 74
Sudbury,	4,210 85	1,952 50	1,018 20	115 16	450 00	506 35	216 52	8,469 58	1,746 73	6,722 85
Tewksbury,	6,167 77	744 80	958 11	12 00	726 66	239 89	85 80	8,935 03	2,877 70	6,057 33
Townsend,	4,592 00	1,397 70	878 71	1 00	850 00	386 51	123 00	8,228 92	1,424 48	6,804 44
Townsend,	3,294 49	1,370 25	546 42	62 45	180 00	188 13	90 44	5,732 18	2,543 44	3,188 74
Tyngsborough,	39,340 85	1,025 25	7,741 34	-	1,710 00	3,415 96	878 53	53,086 68	2,037 80	51,048 88
Wakefield,	73,110 50	359 25	16,251 09	900 00	2,200 00	5,079 75	1,383 55	99,950 10	125 50	99,824 60
Waltham,	38,496 71	359 25	2,407 32	100 00	2,000 00	2,643 86	1,087 40	47,094 54	-	47,094 54
Watertown,	7,258 86	1,885 05	1,212 87	214 10	702 20	1,004 75	266 06	12,543 89	1,185 57	11,358 32
Wayland,	7,796 76	922 60	1,124 88	9 13	800 00	589 60	294 19	11,337 16	1,702 50	9,634 66
Westford,	8,814 23	3,922 75	2,247 54	450 00	100 00	922 75	631 89	17,089 16	-	17,089 16
Weston,	5,887 02	214 00	1,592 38	-	630 00	800 12	138 01	9,261 53	1,544 80	7,716 73
Wilmington,	34,216 55	704 50	7,710 92	200 00	1,700 00	2,887 30	2,610 62	50,029 89	213 00	49,816 89
Winchester,	43,632 11	156 00	8,353 10	400 00	1,937 50	4,012 39	1,229 09	59,720 19	595 60	59,124 59
Woburn,	-	-	-	-	-	-	-	-	-	-
Totals,	\$2,138,225 20	\$50,351 09	\$414,324 56	\$31,083 58	\$65,013 74	\$164,459 81	\$80,912 43	\$2,944,370 41	\$76,775 51	\$2,867,594 90

## BOARD OF EDUCATION.

## MIDDLESEX COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.				Principal.	Income.	
Acton, . . . . .	—	\$756 56	\$364 84	\$1,121 40	—	\$10,065 91	—	—	\$341 77
Arlington, . . . . .	—	939 13	1,872 13	2,811 26	—	58,934 67	\$38,181 86	\$1,437 16	—
Ashby, . . . . .	—	—	73 85	73 85	—	3,120 76	637 00	22 49	—
Ashland, . . . . .	—	1,910 58	405 40	2,315 98	—	9,313 52	—	—	297 79
Ayer, . . . . .	\$16,675 50	302 67	367 18	17,345 35	—	26,412 90	—	—	317 65
Bedford, . . . . .	—	—	45 35	45 35	—	4,723 95	—	—	—
Belmont, . . . . .	—	240 74	474 59	715 33	—	24,913 28	—	—	—
BillERICA, . . . . .	—	—	552 11	552 11	—	11,287 37	—	—	439 83
Boxborough, . . . . .	—	—	23 18	23 18	—	951 25	—	—	—
Burlington, . . . . .	—	4,789 09	25,946 50	38,664 88	—	2,173 10	—	—	158 56
Cambridge, . . . . .	8,229 29	17 50	16 71	34 21	—	512,967 20	—	—	—
Carlisle, . . . . .	—	535 09	546 61	1,081 70	\$12 50	1,315 58	500 00	20 20	—
Chelmsford, . . . . .	—	—	1,040 83	1,040 83	—	19,470 24	—	—	647 80
Concord, . . . . .	—	—	627 31	9,436 79	—	31,463 22	26,300 00	1,244 91	—
Dracut, . . . . .	8,773 52	35 96	6 87	9,436 79	—	23,956 55	3,000 00	109 72	569 72
Dunstable, . . . . .	—	72 94	—	79 81	—	1,392 07	—	—	—
Everett, . . . . .	65,611 17	5,331 82	6,263 12	77,206 11	—	237,551 98	—	—	—
Frammingham, . . . . .	—	2,100 00	2,289 48	4,389 48	—	58,439 85	1,259 00	75 54	1,308 48
Groton, . . . . .	—	3,827 50	—	3,827 50	—	14,852 26	—	—	—
Holliston, . . . . .	—	—	1,005 54	1,005 54	—	11,323 77	—	—	—

## SCHOOL RETURNS.

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Hopkinton,	902 17	-	902 17	-	902 17	10,447 17	5,836 00	233 44	392 77
Hudson,	1,080 88	971 61	2,052 49	-	2,052 49	24,395 06	-	-	333 33
Lexington,	2,064 00	1,261 19	3,325 19	-	3,325 19	31,078 80	1,500 00	70 00	-
Lincoln,	-	78 78	78 78	-	78 78	6,656 74	-	46 34	-
Littleton,	-	525 96	525 96	-	525 96	6,282 55	3,500 00	210 00	327 97
Lowell,	39,920 17	31,887 35	72,423 82	-	72,423 82	420,476 15	-	-	-
Malden,	124,102 10	-	131,432 51	-	131,432 51	327,914 04	-	-	-
Marlborough,	-	2,030 61	2,030 61	-	2,030 61	56,785 72	5,600 00	270 44	-
Maynard,	20,841 38	87 74	20,929 12	-	20,929 12	40,877 38	-	-	-
Medford,	-	2,113 67	2,934 98	-	2,934 98	119,445 66	-	-	-
Melrose,	821 31	2,599 90	2,724 70	-	2,724 70	80,853 90	-	-	-
Natick,	124 80	1,963 55	12,939 94	-	12,939 94	57,466 25	-	-	-
Natick,	10,976 39	11,694 67	11,694 67	-	11,694 67	251,487 99	-	-	-
Newton,	-	59 95	1,259 95	-	1,259 95	3,912 41	-	-	3,603 21
North Reading,	1,200 00	843 35	843 35	-	843 35	14,362 68	-	-	653 04
Pepperell,	-	1,166 86	93,366 86	-	93,366 86	125,774 42	-	-	-
Reading,	92,200 00	79 28	278 28	-	278 28	3,599 58	-	-	-
Sherborn,	199 00	94 22	776 23	-	776 23	5,602 19	11,040 57	411 71	154 73
Shirley,	682 01	-	50,408 00	-	50,408 00	379,754 00	-	-	-
Somerville,	11,951 00	-	8,514 61	-	8,514 61	37,109 14	-	-	-
Stoneham,	38,457 00	349 55	22 77	90 65	8,423 96	4,183 51	12,000 00	582 72	178 10
Stow,	-	22 77	22 77	-	22 77	9,500 53	3,453 00	46 04	235 66
Sudbury,	2,248 30	529 38	2,777 68	-	2,777 68	6,989 32	-	-	-
Tewksbury,	170 00	761 99	931 99	-	931 99	6,940 37	-	-	-
Townsend,	-	136 13	136 13	-	136 13	3,530 92	2,279 16	110 94	-
Tyngsborough,	50 00	282 18	342 18	-	342 18	53,596 52	-	-	-
Wakefield,	1,924 01	623 63	2,547 64	-	2,547 64	104,378 66	-	-	-
Waltham,	-	4,554 06	4,554 06	-	4,554 06	51,623 46	-	-	-
Watertown,	4,528 92	-	4,528 92	-	4,528 92	11,558 24	-	-	187 33
Wayland,	-	205 58	205 58	5 66	199 92	11,275 81	-	-	-
Westford,	443 51	997 64	1,441 15	-	1,441 15	17,511 90	-	-	-
Weston,	-	422 74	422 74	-	422 74	8,858 85	-	-	291 02
Wilmington,	409 12	733 00	1,142 12	-	1,142 12	52,671 32	1,000 00	26 40	-
Winchester,	-	2,854 43	2,854 43	-	2,854 43	63,280 90	-	-	-
Woburn,	81,107 16	2,660 10	85,263 47	81,107 16	4,156 31	-	-	-	-
Totals,	\$495,917 29	\$114,223 47	\$688,383 74	\$81,215 97	\$607,167 77	\$3,474,762 67	\$116,086 59	\$4,918 05	\$10,438 76

## BOARD OF EDUCATION.

## MIDDLESEX COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		Principal.	Income.
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.		
Acton, . . . . .	\$845 62	\$250 00	1	1	1	1				
Arlington, . . . . .	—	—	1	1	1	1				
Ashby, . . . . .	1,427 51	—	1	1	1	1				
Ashland, . . . . .	1,077 50	—	1	1	1	1				
Ayer, . . . . .	845 62	—	1	1	1	1				
Bedford, . . . . .	706 50	—	1	1	1	1				
Belmont, . . . . .	—	—	1	28	1	1	\$4,500 00		\$32,140 00	\$4,500 00
Billerica, . . . . .	770 62	—	1	1	1	1				1,633 87
Boxborough, . . . . .	963 75	—	1	1	1	1				
Burlington, . . . . .	995 62	—	1	1	1	1				
Cambridge, . . . . .	—	—	1	1	16	4,068		\$43,630 00		
Carlisle, . . . . .	1,056 50	—	1	1	1	1				
Chelmsford, . . . . .	—	—	1	1	3	67	64,750 00	16,750 00	8,000 00	420 00
Concord, . . . . .	—	60 00	1	89	1	1				
Draut, . . . . .	1,002 50	—	1	1	1	1				
Dunstable, . . . . .	1,427 50	—	1	1	1	1				
Everett, . . . . .	—	—	1	1	1	1				
Framingham, . . . . .	—	—	1	1	1	19	115,340 00	3,000 00	75,000 00	3,000 00
Groton, . . . . .	—	—	1	158	1	1				
Holliston, . . . . .	845 62	—	1	1	1	1				

### SCHOOL RETURNS.

[illegible]

## BOARD OF EDUCATION.

## NANTUCKET COUNTY.

TOWNS AND CITIES.	SCHOOL CENSUS DATA SEPT. 1, 1906.			SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.									
	Population — State Census of 1905.	Valuation — May 1, 1906.	No. of public schools.	No. of persons in towns be- tween 5 and 15 years of age.	No. of persons in towns be- tween 7 and 14 years of age.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.	
Nantucket, .	2,930	\$3,249,386	11	414	296	544	4	99	236	369	324	.88	27

## NORFOLK COUNTY.

Avon, . . .	1,901	\$909,598	9	387	280	426	5	25	285	365	345	.94	27
Bellingham, . . .	1,686	790,995	9	308	217	291	—	6	213	265	250	.94	16
Braintree, . . .	6,879	5,039,666	32	1,226	863	1,484	122	92	918	1,331	1,224	.91	95
Brookline, . . .	23,436	93,282,300	96	3,611	2,563	4,247	312	482	2,605	3,682	3,399	.92	195
Canton, . . .	4,702	4,006,407	17	817	654	647	4	61	436	562	520	.92	21
Cohasset, . . .	2,727	6,598,174	11	378	280	479	—	57	290	435	397	.91	27
Dedham, . . .	7,774	11,598,542	40	1,362	1,028	1,728	177	176	959	1,556	1,440	.93	80
Dover, . . .	636	1,040,126	6	135	101	116	—	9	84	108	100	.93	9
Foxborough, . . .	3,364	2,111,871	16	467	592	592	—	59	386	548	504	.92	32
Franklin, . . .	5,244	3,586,105	21	997	614	985	3	117	694	898	804	.90	31
Holbrook, . . .	2,509	1,287,144	12	457	319	551	3	31	355	469	440	.94	29
Hyde Park, . . .	14,510	13,077,025	49	2,828	1,687	2,111	—	439	1,219	1,863	1,762	.91	125

Medfield, . . . . .	3,314	1,548,050	7	236	172	269	4	23	185	241	225	.93	15
Medway, . . . . .	2,650	1,337,870	11	433	301	512	5	47	382	437	406	.92	19
Millis, . . . . .	1,252	741,555	7	238	169	275	1	34	172	240	222	.92	15
Milton, . . . . .	7,054	22,222,040	44	1,291	949	1,516	199	227	772	1,384	1,291	.93	82
Needham, . . . . .	4,284	4,504,572	23	788	586	907	10	90	572	845	791	.94	41
Norfolk, . . . . .	1,089	707,581	5	146	85	165	3	13	88	135	124	.92	9
Norwood, . . . . .	6,731	5,640,530	33	1,411	984	1,564	4	146	1,027	1,426	1,330	.93	52
Plainville, . . . . .	1,300	689,002	8	212	140	221	1	27	147	205	179	.88	15
Quincy, . . . . .	28,076	26,787,085	115	6,902	5,331	6,160	10	403	4,177	5,591	5,152	.92	396
Randolph, . . . . .	4,034	1,999,750	16	696	543	726	8	43	511	647	611	.94	44
Sharon, . . . . .	2,085	2,351,295	11	323	252	368	2	43	252	320	291	.90	20
Stoughton, . . . . .	5,959	3,414,548	22	1,021	697	906	19	77	568	810	725	.91	26
Walpole, . . . . .	4,003	3,851,581	20	730	571	816	1	78	571	750	685	.91	50
Wellesley, . . . . .	6,189	12,591,165	24	760	539	922	21	124	597	871	800	.92	54
Westwood, . . . . .	1,136	2,087,205	5	228	167	212	4	5	141	178	163	.92	9
Weymouth, . . . . .	11,585	6,952,247	54	2,064	1,524	2,294	28	209	1,576	2,148	1,955	.93	125
Wrentham, . . . . .	1,428	1,041,169	8	216	157*	241	-	23	198	207	185	.90	16
Totals, . . . . .	167,537	\$241,705,198	731	30,771	22,440	31,731	946	3,166	20,380	28,517	26,320	.92	1,675

NANTUCKET COUNTY — CONTINUED.

TOWNS AND CITIES.	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		TEACHERS AND TEACHERS' WAGES.					LENGTH OF SCHOOLING.			HIGH SCHOOLS.						
	Men.	Women.	In high schools.	In elemen- tary schools.	No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
Nantucket.	1	17	1	—	4	\$100 00	\$33 30	Average number of months kept during the year.	107-4	9-15	1	4	86	1	4	86	1	10	\$3,300 00

NORFOLK COUNTY — CONTINUED.

Avon.	1	9	2	—	6	\$95 00	\$40 75	85-6	9-8	1	2	57	23	6	9-11	\$1,663 00
Bellingham.	—	9	5	1	4	—	43 12	81	9	1	—	178	82	—	—	—
Braintree.	3	38	5	2	11	110 00	49 25	312	9-15	1	6	22	164	16	9-15	6,160 75
Brookline.	15	136	14	3	64	207 66	73 82	926-8	9-13	1	—	486	21	74	9-13	39,386 14
Canton.	2	18	3	—	7	112 00	53 00	170	10	1	3	68	21	6	10	3,261 53
Cohasset.	1	15	4	1	8	164 00	51 98	110	10	1	5	72	9	17	10	5,635 00
Dedham.	5	51	6	2	36	148 00	61 77	361-14	9-5	1	9	202	78	35	9-7	10,453 80
Dover.	1	5	1	—	3	64 00	50 86	56-6	9-7	1	1	12	3	5	9-16	921 68
Foxborough.	1	17	3	1	5	138 95	44 92	140-9	8-15	1	3	70	31	7	9-6	3,261 00
Franklin.	2	23	5	—	11	65 33	47 93	181-18	8-13	1	5	97	33	10	9-12	4,500 00
Holbrook.	1	12	2	—	5	120 00	44 00	108-17	9-1	1	2	67	30	1	9-13	2,100 00
Hyde Park.	9	46	13	4	19	125 50	54 00	490	10	1	14	379	111	43	10	14,880 98



## SCHOOL RETURNS.

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Medfield, . . . . .	1	7	2	-	5	90 00	46 43	65-2	9-6	1	2	32	16	-	9-10	2,066 07
Medway, . . . . .	1	13	2	-	7	102 56	44 23	97-4	8-16	1	3	51	13	10	9-15	2,729 18
Mills, . . . . .	-	8	2	-	4	-	44 00	61-14	8-16	1	2	46	19	2	9-13	1,410 00
Milton, . . . . .	-	54	6	3	36	170 69	73 23	396-4	9-1	1	9	184	66	39	9-3	15,600 00
Needham, . . . . .	-	27	5	3	10	115 00	49 63	216-5	9-4	1	5	117	31	20	9-18	5,224 84
Norfolk, . . . . .	-	4	-	-	2	80 00	46 00	44-13	8-18	1	1	19	3	7	9-13	1,120 38
Norwood, . . . . .	-	39	7	3	23	112 58	57 83	303-13	9-4	1	7	151	48	11	9-11	6,833 25
Plainville, . . . . .	1	8	3	-	4	466 00	44 76	72-1	9	1	3	30	13	3	9-13	2,415 00
Quincy, . . . . .	16	129	14	1	57	118 11	63 16	1,060-17	9-4	1	20	716	288	87	9-10	23,394 48
Randolph, . . . . .	3	15	3	-	6	119 29	46 80	146-12	9-3	1	3	93	36	15	8-19	3,261 48
Sharon, . . . . .	1	12	3	-	6	115 00	49 00	108-9	9-17	1	3	51	16	8	9-17	2,580 00
Stoughton, . . . . .	-	25	3	1	6	150 00	48 50	187-14	8-18	1	4	75	24	13	9-14	3,867 00
Walpole, . . . . .	3	21	4	-	11	94 66	50 70	192-10	9-12	1	5	111	55	22	9-15	5,740 40
Wellesley, . . . . .	1	38	6	3	20	214 00	61 51	214-19	8-19	1	6	123	45	24	9-14	9,372 54
Westwood, . . . . .	-	5	-	-	4	80 00	54 50	47-3	9-8	1	-	-	-	-	-	-
Weymouth, . . . . .	7	56	9	2	28	88 57	48 00	502-11	9-6	1	9	245	91	46	9-17	9,865 35
Wrentham, . . . . .	2	8	3	-	4	77 50	40 12	73-8	9-3	1	3	28	2	6	10	2,307 58
Totals, . . . . .	89	848	130	30	412	\$132 62	\$58 17	6,814-7	9-6	27	157	3,759	1,351	533	9-13	\$190,011 43

## NANTUCKET COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Nantucket, . .	\$6,397 00	\$120 00	\$958 01	\$34 11	-	\$919 65	\$261 39	\$8,690 16	-	\$8,690 16

## NORFOLK COUNTY — CONTINUED.

Avon, . .	\$1,988 95	-	\$1,321 60	\$100 00	\$400 00	\$612 49	\$197 94	\$7,620 98	\$1,494 57	\$6,126 41
Bellingham, . .	4,127 50	\$993 15	1,086 30	3 00	643 90	440 75	326 31	7,619 91	2,018 66	5,601 25
Braintree, . .	21,040 88	1,693 75	5,128 50	33 12	1,500 00	1,788 00	1,198 80	32,393 85	311 70	32,082 15
Brookline, . .	133,672 05	1,920 25	33,480 29	3,000 00	4,000 00	14,827 38	7,657 65	198,557 62	-	198,557 62
Canton, . .	12,430 00	117 50	2,371 92	25 00	1,000 00	2,226 94	40 00	18,211 36	255 50	17,955 86
Cohasset, . .	9,998 90	2,856 15	2,296 19	115 00	750 00	959 49	322 32	17,398 05	35 30	17,362 75
Dedham, . .	38,499 33	605 97	6,202 67	100 00	2,200 00	2,850 28	642 38	51,100 63	1,496 44	49,604 19
Dorset, . .	4,244 42	1,263 57	593 12	175 00	300 00	422 94	154 61	7,153 66	1,682 15	5,471 51
Foxborough, . .	8,910 74	1,008 00	2,592 62	187 00	900 00	726 32	417 07	14,741 75	1,676 48	13,065 27
Franklin, . .	12,898 76	2,895 88	3,635 48	-	1,000 00	1,968 25	447 38	22,875 75	789 35	22,086 40
Holbrook, . .	6,172 25	-	1,685 82	150 00	500 00	912 88	493 29	9,914 24	1,477 29	8,436 95
Hyde Park, . .	36,216 66	18 00	7,914 33	250 00	2,352 31	4,106 52	3,626 81	54,484 63	-	54,484 63

## SCHOOL RETURNS.

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Medfield, . . . . .	4,647 51	321 07	966 31	105 00	616 00	867 43	504 55	8,027 87	2,027 87	6,000 00
Medway, . . . . .	6,249 12	839 00	1,140 42	58 00	560 00	1,284 20	181 76	10,312 50	1,677 63	8,634 87
Millis, . . . . .	3,433 00	786 00	782 91	70 00	500 00	340 54	201 29	6,113 74	1,780 93	4,332 81
Milton, . . . . .	46,294 92	1,672 50	10,401 08	446 23	2,400 00	4,204 36	1,330 96	66,750 05	—	66,750 05
Needham, . . . . .	15,669 94	134 00	3,627 21	45 00	800 00	1,749 44	1,965 39	23,990 98	1,438 75	22,552 23
Norfolk, . . . . .	2,607 53	1,009 23	518 91	113 00	500 00	144 18	98 79	4,991 64	1,551 68	3,439 96
Norwood, . . . . .	24,691 65	480 00	6,587 32	110 00	2,028 80	3,166 02	2,214 46	39,278 25	—	39,278 25
Plainville, . . . . .	4,683 13	400 75	1,212 40	138 08	450 00	507 07	241 84	7,633 27	675 00	6,958 27
Quincy, . . . . .	91,373 78	1,097 20	14,278 78	866 66	2,500 00	7,758 77	2,456 79	190,331 98	133 00	190,198 98
Randolph, . . . . .	10,558 46	252 50	1,222 99	340 00	600 00	856 34	1,380 77	15,211 06	1,443 13	13,767 93
Sharon, . . . . .	7,483 75	307 50	1,989 21	30 00	330 00	948 09	15 00	11,103 55	1,851 04	9,252 51
Stoughton, . . . . .	12,466 00	90 00	2,874 61	303 48	660 00	1,834 23	816 34	19,044 66	838 25	18,206 41
Walpole, . . . . .	14,186 15	1,439 00	3,849 28	29 21	1,043 70	1,978 60	913 79	23,439 73	1,075 63	22,364 10
Wellesley, . . . . .	24,685 50	—	5,608 08	169 20	1,500 00	3,541 43	1,562 25	37,066 46	50 03	37,016 43
Westwood, . . . . .	4,453 00	750 00	743 53	200 00	500 00	252 38	214 94	7,113 85	1,353 56	5,760 29
Weymouth, . . . . .	35,023 37	2,280 00	8,117 02	462 10	1,880 00	4,737 73	930 43	53,430 65	135 15	53,295 50
Wrentham, . . . . .	4,744 65	885 75	1,071 82	100 00	450 00	466 53	158 76	7,877 51	746 06	7,131 45
Totals, . . . . .	\$606,451 90	\$26,216 72	\$133,300 72	\$7,723 08	\$32,864 71	\$66,520 38	\$30,712 67	\$903,790 18	\$28,015 15	\$875,775 03

## NANTUCKET COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.				Principal.	Income.	
Nantucket, . . . . .	-	\$1,131 71	\$365 50	\$1,497 21	-	\$1,497 21	-	-	\$339 80

## NORFOLK COUNTY — CONTINUED.

Avon, . . . . .	-	\$153 60	\$269 74	\$423 34	-	\$423 34	\$6,549 75	-	\$315 61
Bellingham, . . . . .	-	7,247 25	1 35	7,248 60	-	7,248 60	12,849 85	-	884 96
Brantree, . . . . .	-	313 06	255 09	568 15	-	568 15	32,650 30	\$200 00	-
Brookline, . . . . .	-	3,000 46	8,124 74	11,125 20	-	11,125 20	209,682 82	-	-
Canton, . . . . .	-	16,960 00	1,496 24	18,456 24	-	18,456 24	36,412 10	-	678 11
Cohasset, . . . . .	-	-	1,511 87	1,511 87	-	1,511 87	18,874 62	35 30	532 63
Dedham, . . . . .	-	1,465 80	1,890 54	3,356 34	-	3,356 34	52,960 53	-	-
Dover, . . . . .	-	-	124 06	124 06	-	124 06	5,595 57	-	-
Foxborough, . . . . .	-	-	294 58	294 58	-	294 58	13,359 85	-	739 75
Franklin, . . . . .	-	1,909 86	474 17	2,384 03	-	2,384 03	24,470 43	-	724 01
Holbrook, . . . . .	-	-	200 00	200 00	-	200 00	8,636 95	-	-
Hyde Park, . . . . .	-	2,000 00	1,600 00	3,600 00	-	3,600 00	58,084 63	-	-

## SCHOOL RETURNS.

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Medfield, . . . . .	302 11	302 11	\$2 11	300 00	6,300 00	3,540 00	141 00	-
Medway, . . . . .	948 80	948 80	-	948 80	9,583 67	-	-	-
Millis, . . . . .	62 14	162 14	-	162 14	4,494 95	-	-	-
Milton, . . . . .	2,619 04	10,077 69	-	10,077 69	76,827 74	-	-	-
Needham, . . . . .	650 00	21,359 35	-	21,359 35	43,911 58	5,250 00	210 00	-
Norfolk, . . . . .	65 89	252 16	-	252 16	3,692 12	-	-	180 18
Norwood, . . . . .	1,266 13	30,202 97	-	30,202 97	69,481 22	-	-	-
Plainville, . . . . .	121 03	121 03	-	121 03	7,079 30	727 30	29 09	366 69
Quincy, . . . . .	2,672 61	95,369 21	-	95,369 21	215,568 19	1,000 00	35 00	-
Randolph, . . . . .	485 02	3,633 75	-	3,633 75	17,401 68	18,286 33	865 61	472 32
Sharon, . . . . .	292 28	735 70	735 70	-	9,252 51	12,671 78	682 69	-
Stoughton, . . . . .	1,271 35	1,271 35	-	1,271 35	19,477 76	1,000 00	35 28	566 93
Walpole, . . . . .	1,391 47	2,737 95	-	2,737 95	25,102 05	-	-	-
Wellesley, . . . . .	1,704 23	1,704 23	-	1,704 23	38,720 66	-	-	8 25
Westwood, . . . . .	90 79	1,909 17	-	1,909 17	7,669 46	-	-	661 87
Wrentham, . . . . .	5,427 43	8,282 61	-	8,282 61	61,578 11	-	-	257 78
	87 79	87 79	-	87 79	7,219 24	1,090 96	68 96	-
Totals, . . . . .	\$35,730 49	\$228,450 42	\$737 81	\$227,712 61	\$1,103,487 64	\$51,266 37	\$2,302 93	\$6,389 09

## BOARD OF EDUCATION.

## NANTUCKET COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		FUNDS WHOSE INCOME MUST BE APPROPRIATED TO ACADEMIES OR PRIVATE SCHOOLS.	
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.	Principal.	Income.
Nantucket,	—	—	1	—	1	1	1	—	\$60,000 00	\$2,700 00

## NORFOLK COUNTY — CONCLUDED.

Avon,	\$995 62	—	—	—	—	—	—	—	—	—
Bellingham,	1,227 50	—	—	—	—	—	—	—	—	—
Braintree,	—	—	—	125	—	—	\$1,000 00	—	\$325,000 00	\$19,000 00
Brookline,	—	—	—	—	—	337	—	—	—	—
Canton,	—	—	—	—	2	298	—	—	—	—
Cohasset,	—	—	—	—	1	—	—	—	—	—
Dedham,	—	\$100 00	—	—	—	—	—	—	—	—
Dover,	—	—	—	—	—	—	—	—	—	—
Foxborough,	1,077 50	—	—	—	—	—	—	—	—	—
Franklin,	770 62	—	—	—	—	—	—	—	—	—
Hobrook,	—	50 00	1	195	—	—	10,909 63	—	105,000 00	5,900 00
Hyde Park,	845 62	—	—	—	3	1,116	—	—	—	—

### SCHOOL RETURNS.

[illegible]

## PLYMOUTH COUNTY.

TOWNS AND CITIES.	Population — State Census of 1905.	Valuation — May 1, 1906.	No. of public schools.	School Census Data Sept. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.						
				No. of persons in towns between 5 and 15 years of age.	No. of persons in towns between 7 and 14 years of age.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.
Abington, . . .	5,081	\$2,676,051	20	826	607	1,001	136	617	928	863	.93	70
Bridgewater, . . .	6,754	3,219,505	25	707	510	949	74	488	838	781	.93	42
Brookton, . . .	47,794	35,168,140	170	8,314	6,271	8,740	749	6,029	7,781	7,276	.94	416
Carver, . . .	1,410	1,220,455	10	191	133	182	9	131	175	153	.88	11
Duxbury, . . .	2,028	1,902,643	10	227	174	266	49	159	233	214	.92	22
East Bridgewater, . . .	3,169	1,693,055	14	523	392	568	58	375	533	499	.94	25
Halifax, . . .	494	354,654	2	87	63	94	5	61	67	59	.88	12
Hanover, . . .	2,176	1,386,945	10	350	246	405	60	266	375	349	.93	32
Hanson, . . .	1,490	1,084,911	8	230	165	276	6	193	224	202	.90	15
Hingham, . . .	4,819	4,520,874	20	744	522	888	148	517	813	771	.96	52
Hull, . . .	2,060	4,755,695	8	201	143	210	8	144	184	175	.96	10
Kingston, . . .	2,205	1,501,336	12	367	277	415	33	295	386	364	.94	24
Lakeville, . . .	912	639,927	6	151	121	138	5	105	132	121	.92	7
Marion, . . .	1,029	1,631,000	6	141	101	131	5	94	117	110	.94	8
Marshfield, . . .	1,763	1,716,200	11	249	170	295	39	178	257	232	.90	21
Mattapoisett, . . .	1,180	1,550,539	7	206	173	210	14	137	192	178	.93	10
Middleborough, . . .	6,888	4,350,461	34	1,241	865	1,482	162	966	1,268	1,188	.94	66
Norwell, . . .	1,534	827,483	7	231	162	251	27	148	239	218	.91	19
Pembroke, . . .	1,261	925,435	7	201	141	202	10	138	171	156	.91	14
Plymouth, . . .	11,119	9,800,938	49	1,858	1,323	1,987	156	1,353	1,880	1,759	.94	76



Plympton, .	514	324,237	3	60	45	61	-	1	41	48	41	.86	1
Rochester, .	1,181	598,630	6	155	114	164	-	3	123	143	126	.88	2
Rockland, .	6,287	3,523,598	25	1,058	762	1,188	9	138	760	1,129	1,059	.93	73
Scituate, .	2,597	3,993,671	12	414	313	514	-	68	313	453	402	.90	30
Wareham, .	3,660	3,517,991	21	592	489	615	-	52	440	563	522	.93	24
West Bridgewater, .	2,006	1,124,130	10	345	246	329	-	5	234	313	289	.93	17
Whitman, .	6,521	4,263,685	25	1,226	871	1,316	2	156	860	1,261	1,199	.95	84
Totals, .	127,932	\$98,380,189	538	20,895	15,399	22,877	101	2,172	15,165	20,703	19,306	.93	1,183

## SUFFOLK COUNTY.

Boston, .	595,380	\$1,289,705,887	1,830	104,018	70,753	105,129	3,003	9,842	59,106	93,442	84,870	.91	4,299
Chelsea, .	37,289	25,966,425	132	7,419	6,949	7,319	-	478	4,861	6,386	5,932	.92	313
Revere, .	12,639	13,051,800	67	2,981	2,037	2,940	3	280	2,027	2,805	2,620	.93	166
Winthrop, .	7,034	9,571,397	30	1,334	959	1,574	-	185	935	1,379	1,267	.92	85
Totals, .	652,362	\$1,338,295,509	2,059	115,752	80,698	116,962	3,006	10,785	66,929	104,012	94,689	.91	4,863

## PLYMOUTH COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.				LENGTH OF SCHOOLING.				HIGH SCHOOLS.								
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.	
			In high schools.	In elementary schools.													
	Men.	Women.															
Abington, . . . . .	3	25	7	1	18	\$98 33	\$51 08	186-7	9-6	1	1	8	204	61	25	9-10	\$8,145 00
Bridgewater, . . . . .	3	29	6	1	23	156 66	63 44	231-15	9-3	1	1	6	129	41	27	9-6	7,610 74
Brockton, . . . . .	14	191	20	—	121	164 27	64 82	1,538-10	9-1	1	1	24	715	305	71	9-7	34,903 52
Carver, . . . . .	3	8	2	—	3	45 33	37 00	87-16	8-15	1	1	2	14	9	3	9-12	1,400 00
Duxbury, . . . . .	1	11	1	—	4	100 00	43 35	89-4	8-18	1	1	3	53	23	7	9-11	1,640 00
E. Bridgewater, . . . . .	1	17	3	—	10	106 25	44 47	120-12	8-12	1	1	2	69	24	11	9-13	2,323 65
Halifax, . . . . .	—	2	—	1	2	—	47 80	17-3	8-11	—	—	—	—	—	—	—	—
Hanover, . . . . .	2	11	3	—	—	80 00	44 44	92-15	9-5	1	1	3	85	25	22	9-9	2,458 54
Hanson, . . . . .	1	7	—	—	2	48 00	39 00	65-13	8-4	—	—	—	—	—	—	—	—
Hingham, . . . . .	5	21	6	4	16	120 00	52 33	200	10	1	1	6	192	24	38	10	7,708 83
Hull, . . . . .	2	6	—	—	8	85 00	48 00	76	9-10	—	—	—	—	—	—	—	—
Kingston, . . . . .	1	13	2	—	7	100 00	45 54	108	9	1	1	3	61	18	10	9-15	3,024 77
Lakeville, . . . . .	—	6	—	—	4	—	37 64	53-2	8-17	—	—	—	—	—	—	—	—
Marion, . . . . .	—	5	—	1	3	60 00	44 80	54	9	1	1	6	85	32	11	9-5	11,000 00
Marshfield, . . . . .	1	11	1	—	6	100 00	40 00	97-18	8-18	1	1	2	53	19	8	9-18	2,645 67
Mattapoisett, . . . . .	1	7	2	—	3	75 00	40 57	65	9-6	1	1	2	12	10	3	9-15	506 69
Middleborough, . . . . .	5	37	4	—	7	105 00	45 91	324-5	9-8	1	1	7	205	70	32	9-10	8,850 00
Norwell, . . . . .	1	8	3	—	3	90 00	41 25	67	9-11	1	1	3	46	23	7	10	2,662 84
Pembroke, . . . . .	1	6	—	—	—	64 00	37 33	62-10	8-19	1	1	1	32	16	7	8-15	804 56
Plymouth, . . . . .	6	52	6	2	23	95 00	48 69	483-6	9-12	1	1	6	145	68	22	9-17	7,350 00

Plympton, .	3	—	—	—	41 06	25-10	8-10	—	—	—	—	—	—	—	—	—	—
Rochester, .	5	1	—	—	40 00	62-9	8-15	—	—	—	—	—	—	—	—	—	—
Rockland, .	26	5	5	—	13 89 00	236-12	9-10	1	7	198	86	25	9-12	—	—	6,425 70	—
Sacutate, .	12	1	2	1	2 110 00	114	9-10	1	2	65	29	2	10	—	—	2,600 00	—
Wareham, .	22	1	3	1	6 100 00	190	9-1	1	3	58	17	20	10	—	—	3,721 27	—
W. Bridgewater, .	11	—	3	—	7 —	86-10	8-13	1 <sup>3</sup>	9	26	11	4	8-7	—	—	—	—
Whitman, .	33	2	7	—	16 107 48	239-8	9-12	1	7	187	84	16	9-17	—	—	6,385 22	—
Totals, .	585	62	83	12	316 \$111 27	\$53 53	9-5	21	112	2,634	995	371	9-11	—	—	\$122,167 00	—

## SUFFOLK COUNTY — CONTINUED.

Boston, .	2,162	291	162	94	1,774 \$220 67	\$73 60	17,477	9-11	13	292	8,455	3,722	1,822	122-17	—	\$656,981 04	—
Chelsea, .	179	8	12	1	75 171 87	71 54	1,213-18	9-5	1	19	459	230	45	8-12	—	23,441 14	—
Revere, .	74	4	4	1	30 126 67	56 85	630-4	9-8	1	8	194	115	21	9-1	—	8,793 96	—
Winthrop, .	34	4	6	1	24 133 75	63 96	280-10	9-7	1	8	186	88	22	9-7	—	9,850 00	—
Totals, .	2,449	307	184	97	1,903 \$217 04	\$72 80	19,601-12	9-10	16	327	9,294	4,155	1,910	9-7	—	\$698,066 14	—

<sup>1</sup> Partridge Academy.<sup>2</sup> Tabor Academy.<sup>3</sup> Howard Seminary.

## PLYMOUTH COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Abington, . . . . .	\$16,076 66	\$920 00	\$3,165 82	\$350 00	\$941 67	\$1,937 67	\$1,195 35	\$24,587 17	\$1,154 00	\$23,433 17
Bridgewater, . . . . .	23,563 50	606 04	1,841 03	- - -	941 67	1,407 58	740 03	29,099 85	8,597 10	20,502 75
Brockton, . . . . .	147,095 73	100 00	33,401 63	1,500 21	3,000 00	9,651 02	7,407 14	202,155 73	247 25	201,908 48
Carver, . . . . .	3,987 50	285 50	541 89	168 85	600 00	316 48	22 00	5,922 22	861 50	5,060 72
Duxbury, . . . . .	5,111 67	-	823 21	72 70	500 00	367 08	44 39	6,919 05	992 07	5,926 98
East Bridgewater, . . . . .	8,388 20	615 00	1,572 27	-	700 00	654 65	378 57	12,308 69	1,466 19	10,842 50
Halifax, . . . . .	834 75	1,095 42	204 25	50	200 00	88 36	5 00	2,428 28	1,245 89	1,182 39
Hanover, . . . . .	6,378 03	552 75	820 48	130 00	500 00	702 91	87 65	9,171 82	9,171 82	8,042 50
Hanson, . . . . .	3,762 20	201 75	89 38	122 31	500 00	372 72	203 06	5,251 42	1,671 51	3,579 91
Hingham, . . . . .	16,882 00	1,065 00	4,464 35	115 00	1,300 00	1,799 51	1,336 51	26,962 37	1,698 00	25,264 37
Hull, . . . . .	4,982 57	1,905 10	2,077 39	235 00	250 00	760 64	508 53	10,719 23	-	10,719 23
Kingston, . . . . .	6,754 00	450 56	1,389 67	123 00	600 00	851 81	177 44	10,346 48	1,999 00	8,347 48
Lakeville, . . . . .	2,032 50	549 25	127 98	69 00	450 00	241 23	24 73	3,494 69	2,121 87	1,372 82
Marion, . . . . .	2,896 20	540 00	594 54	220 49	672 88	243 59	16 28	5,183 98	892 10	4,291 88
Marshfield, . . . . .	5,545 20	1,252 70	523 80	216 25	500 00	495 95	514 36	9,048 26	1,453 96	7,594 30
Mattapoisett, . . . . .	3,582 00	706 00	888 38	106 00	330 00	481 10	144 65	6,238 13	1,454 75	4,783 38
Middleborough, . . . . .	19,488 70	2,140 30	3,187 84	188 00	1,716 64	1,667 42	760 04	29,148 94	-	29,148 94
Norwell, . . . . .	3,953 50	2,485 50	487 13	104 00	500 00	529 36	125 45	8,184 94	2,023 16	6,161 78
Pembroke, . . . . .	3,002 66	115 00	286 55	106 00	500 00	256 85	40 04	4,307 10	1,451 92	2,855 18
Plymouth, . . . . .	31,927 98	528 50	7,849 79	100 00	2,000 00	3,351 70	1,030 46	46,788 43	18 25	46,770 18

## SUFFOLK COUNTY — CONTINUED.

Plympton, . . .	1,397 70	4 50	155 05	50 00	200 00	19 27	21 70	1,848 22	976 67	871 55
Rochester, . . .	2,705 10	656 00	161 00	75 98	450 00	300 62	35 91	4,384 61	2,064 87	2,319 74
Rockland, . . .	18,389 64	2 00	3,486 78	—	1,000 00	1,986 84	716 64	25,581 90	649 00	24,932 90
Saltuade, . . .	7,347 02	3,302 68	2,102 53	325 00	500 00	545 62	216 75	14,339 60	52 00	14,287 60
Wareham, . . .	10,072 50	889 78	1,627 60	113 80	1,035 98	1,471 54	522 98	15,734 18	950 73	14,783 45
West Bridgewater, . . .	4,944 61	690 35	718 91	30 25	500 00	430 70	155 95	7,470 77	1,629 17	5,841 60
Whitman, . . .	19,999 62	—	5,184 21	145 00	1,000 00	2,288 74	892 64	29,510 21	928 69	28,581 52
Totals, . . .	\$381,101 74	\$21,659 68	\$77,773 46	\$4,667 34	\$21,388 84	\$33,220 96	\$17,324 25	\$557,136 27	\$37,728 97	\$519,407 30

Boston, . . .	\$2,828,799 27	\$2,035 41	\$362,843 20	\$61,266 82	\$25,662 67	\$87,522 00	\$87,416 93	\$3,455,546 30	\$55,358 64	\$3,400,187 66
Chelsea, . . .	116,147 09	45 00	17,371 09	2,223 34	2,800 00	9,826 47	2,803 08	151,216 07	494 19	150,721 88
Revere, . . .	48,823 04	53 75	11,760 85	841 66	2,000 00	7,458 28	4,208 21	75,145 79	94 12	75,051 67
Winthrop, . . .	27,502 62	125 00	4,465 64	75 00	1,850 00	2,929 36	1,271 28	38,218 90	—	38,218 90
Totals, . . .	\$3,021,272 02	\$2,259 16	\$396,440 78	\$61,406 82	\$32,312 67	\$107,736 11	\$95,699 50	\$3,720,127 06	\$55,946 95	\$3,664,180 11

## PLYMOUTH COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school buildings, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Abington, . . . . .	—	\$522 05	\$745 09	\$1,267 14	—	\$1,267 14	\$24,700 31	—	—	—
Bridgewater, . . . . .	—	1,229 35	314 13	1,543 48	—	1,543 48	22,046 23	\$6,300 00	\$391 35	\$696 34
Brockton, . . . . .	\$152,111 23	22,000 00	11,690 16	185,801 39	\$112,112 23	73,689 16	275,597 64	—	—	2,111 44
Carver, . . . . .	—	—	231 21	231 21	—	231 21	5,291 93	8,000 00	150 00	—
Duxbury, . . . . .	—	—	222 48	1,302 48	—	1,302 48	7,229 46	—	—	317 79
East Bridgewater, . . . . .	—	64 11	256 66	320 77	—	320 77	11,163 27	—	—	544 28
Halifax, . . . . .	—	105 44	—	105 44	—	105 44	1,287 83	—	—	128 74
Hanover, . . . . .	—	1,421 99	389 09	1,811 08	—	1,811 08	9,853 58	—	—	272 07
Hanson, . . . . .	—	—	249 70	249 70	—	249 70	3,829 61	—	—	—
Hingham, . . . . .	—	200 00	1,096 35	1,296 35	—	1,296 35	26,560 72	—	—	—
Hull, . . . . .	—	3,059 78	2,409 85	5,469 63	—	5,469 63	16,188 86	1,000 00	35 30	624 87
Kingston, . . . . .	—	—	630 64	630 64	—	630 64	8,978 12	—	—	226 37
Lakeville, . . . . .	—	—	105 10	105 10	—	105 10	1,477 92	—	—	—
Marion, . . . . .	—	—	397 47	397 47	—	397 47	4,689 35	—	—	201 46
Marshfield, . . . . .	—	—	120 41	120 41	—	120 41	7,714 71	—	—	430 70
Mattapoisett, . . . . .	—	278 32	184 81	463 13	—	463 13	5,246 51	9,858 50	394 78	—
Middleborough, . . . . .	32,000 00	1,100 00	1,558 44	34,658 44	—	34,658 44	63,807 38	—	—	—
Norwell, . . . . .	—	283 49	41 98	325 47	—	325 47	6,487 25	—	—	346 76
Pembroke, . . . . .	—	—	144 78	144 78	—	144 78	2,999 96	—	—	134 99
Plymouth, . . . . .	12,049 75	—	3,066 95	15,116 70	—	15,116 70	61,886 88	325 00	18 25	—

Plympton, . . .	-	36 00	17 60	53 60	-	53 60	925 15	-	111 14
Rochester, . . .	-	-	30 53	30 53	-	30 53	2,350 27	420 00	226 35
Rockland, . . .	-	990 29	804 31	1,794 60	-	1,794 60	26,727 50	-	-
Scituate, . . .	-	79 00	337 21	436 21	-	436 21	14,723 81	-	343 06
Wareham, . . .	-	363 46	525 80	889 26	-	889 26	15,672 71	-	-
West Bridgewater, . . .	-	84 06	133 38	217 44	-	217 44	6,059 04	-	-
Whitman, . . .	7,608 73	812 74	1,113 14	9,534 61	-	9,534 61	38,116 13	-	1,794 32
Totals, . . .	\$204,849 71	\$32,630 08	\$26,837 27	\$264,317 06	\$112,112 23	\$152,204 83	\$671,612 13	\$1,409 68	\$8,500 68

## SUFFOLK COUNTY — CONTINUED.

Boston, . . .	\$716,482 77	\$288,100 00	-	\$1,004,582 77	-	\$1,004,582 77	\$140,477 43	\$5,231 18	\$52,393 61
Chelsea, . . .	15,201 93	-	\$14,877 95	30,079 88	-	30,079 88	180,801 76	-	-
Revere, . . .	-	790 76	637 52	1,448 28	-	1,448 28	76,499 95	-	1,300 00
Winthrop, . . .	13,687 95	10,846 98	1,068 62	25,603 55	-	25,603 55	63,822 45	-	729 70
Totals, . . .	\$745,372 65	\$299,737 74	\$16,604 09	\$1,061,714 48	-	\$1,061,714 48	\$4,725,894 59	\$5,231 18	\$54,423 31





[illegible]

## SUFFOLK COUNTY — CONCLUDED.

Boston, .	-	-	4	475	88	22,144	\$28,985	\$450,618	\$3,266,054	\$140,109
Chelsea, .	.	\$1,259	84	-	2	1,224	-	-	-	-
Revere, .	.	353	88	-	-	-	-	-	-	-
Winthrop, .	.	-	-	-	-	-	-	-	-	-
Totals, .	.	\$1,613	72	4	475	90	23,368	\$450,618	\$3,266,054	\$140,109

## WORCESTER COUNTY.

TOWNS AND CITIES.	Population—State Census of 1905.	Valuation—May 1, 1906.	No. of public schools.	SCHOOL CENSUS DATA SEPT. 1, 1906.		SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.							
				No. of persons in towns be- tween 5 and 15 years of age.	No. of persons in towns be- tween 7 and 14 years of age.	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.
Ashburnham,	1,851	\$914,970	11	367	292	405	5	66	292	351	316	.90	21
Athol,	7,197	4,219,567	26	1,219	875	1,225	—	162	863	1,140	1,072	.93	57
Auburn,	2,006	1,017,600	10	441	379	349	1	5	279	308	269	.87	9
Barre,	2,558	1,632,270	14	425	290	449	—	67	286	367	345	.94	18
Berlin,	906	537,915	5	207	156	193	—	5	144	170	156	.92	16
Blackstone,	5,786	2,257,260	26	1,189	947	1,297	15	36	947	1,025	944	.92	34
Bolton,	762	489,358	4	101	81	128	—	19	69	105	95	.90	9
Boylston,	649	463,768	4	118	81	116	1	3	84	103	93	.90	2
Brookfield,	2,388	1,221,497	17	374	252	460	1	47	299	400	378	.94	23
Charlton,	2,089	1,258,000	15	396	370	444	5	5	17	299	382	.91	12
Clinton,	13,105	7,948,022	46	2,274	1,694	2,153	10	172	1,445	1,899	1,796	.94	91
Dana,	763	359,920	5	133	98	134	1	2	113	128	116	.90	10
Douglas,	2,120	1,187,830	12	362	263	359	—	13	274	312	284	.91	10
Dudley,	3,818	1,487,683	15	734	522	473	7	20	287	356	314	.88	12
Fitchburg,	33,021	25,794,168	116	6,617	4,667	4,475	22	638	2,866	4,019	3,798	.95	182
Gardner,	12,012	6,717,823	38	2,158	1,532	1,755	—	237	1,147	1,594	1,472	.92	114
Grafton,	5,052	2,434,229	22	870	626	878	—	73	633	818	768	.94	47
Hardwick,	3,261	1,680,673	14	582	436	420	—	33	348	388	350	.90	21
Harvard,	1,077	1,122,444	5	149	114	152	—	8	111	131	124	.95	15
Holden,	2,640	1,463,214	16	423	341	583	13	45	363	474	432	.91	12
Hopedale,	2,048	5,274,820	12	328	227	373	9	49	228	352	329	.93	11
Hubbardsston,	1,205	657,280	9	199	151	217	3	10	157	183	166	.91	6
Lancaster,	2,406	3,389,138	12	398	283	389	—	33	281	350	325	.93	23
Leicester,	3,414	2,192,165	19	708	515	773	22	54	561	661	604	.91	32

# SCHOOL RETURNS.

Lxxxiii

Leominster, .	14,297	9,706,910	49	2,615	1,839	2,301	7	228	1,375	2,077	1,941	.93	97
Lunenburg, .	1,283	1,022,638	8	220	153	240	4	23	161	206	188	.91	5
Mendon, .	922	624,320	6	148	111	154	-	13	111	141	132	.94	13
Milford, .	12,105	6,526,774	44	2,050	1,411	1,824	8	176	1,145	1,642	1,555	.95	41
Milbury, .	4,631	2,291,295	19	948	664	816	-	41	601	736	686	.93	41
New Brantree, .	477	399,720	4	102	76	85	1	1	72	75	66	.88	8
Northborough, .	1,947	1,344,980	9	347	285	393	-	41	252	359	335	.93	15
Northbridge, .	7,400	3,907,088	33	1,415	1,035	1,550	4	99	1,113	1,352	1,302	.96	46
North Brookfield, .	2,617	1,630,817	11	530	345	502	-	29	281	422	402	.95	17
Oakham, .	519	344,767	5	92	68	102	-	8	68	90	85	.94	7
Oxford, .	2,927	1,611,820	16	517	474	604	4	35	445	522	487	.93	22
Paxton, .	444	345,100	3	96	67	86	1	1	49	75	70	.92	4
Petersham, .	855	701,636	6	139	101	135	1	11	105	117	108	.92	8
Phillipston, .	442	271,413	4	70	57	79	3	1	57	63	57	.90	1
Princeton, .	907	1,020,468	9	162	111	165	-	13	119	155	142	.92	11
Royalston, .	903	493,598	7	145	118	152	2	2	115	136	123	.90	8
Rutland, .	1,713	717,829	6	237	198	221	1	20	161	208	187	.89	11
Shrewsbury, .	1,866	1,425,409	10	342	259	308	1	24	222	270	249	.92	12
Southborough, .	1,931	1,515,704	9	288	203	368	2	28	234	326	296	.91	15
Southbridge, .	11,000	5,066,303	31	2,074	1,591	1,259	12	145	729	1,019	947	.93	34
Spencer, .	7,121	3,521,150	29	1,266	889	1,080	14	108	713	946	879	.93	50
Sterling, .	1,315	960,900	7	201	144	228	1	20	158	200	182	.91	10
Sturbridge, .	1,974	964,145	12	335	260	352	8	5	255	295	278	.92	11
Sutton, .	3,173	1,229,096	17	568	425	650	1	28	503	526	466	.89	18
Templeton, .	3,783	1,487,053	17	700	480	655	3	57	451	561	510	.91	26
Upton, .	2,024	1,075,164	9	324	233	366	-	48	256	332	310	.93	28
Uxbridge, .	3,881	2,645,260	23	748	519	876	-	48	642	731	663	.91	13
Warren, .	4,300	1,780,646	16	729	415	628	-	86	392	561	534	.95	27
Wabar, .	10,018	6,173,323	21	2,029	1,502	765	7	69	519	685	633	.92	23
Westborough, .	5,378	3,164,577	15	644	467	763	3	87	511	681	647	.95	34
West Boylston, .	1,571	728,603	7	184	144	218	1	26	141	185	174	.94	7
West Brookfield, .	1,384	837,928	7	168	120	190	8	6	136	162	151	.94	7
Westminster, .	1,348	720,350	12	237	197	261	2	27	188	245	225	.91	5
Winchester, .	5,933	3,286,655	25	1,117	795	1,136	3	105	818	995	910	.91	59
Worcester, .	128,135	123,226,501	458	22,495	16,241	22,810	927	2,199	14,592	20,096	18,365	.91	737
Totals, .	362,668	\$268,491,544	1,437	65,054	47,189	60,522	1,157	5,671	40,066	53,208	49,178	.92	2,258

## WORCESTER COUNTY — CONTINUED.

TOWNS AND CITIES.	TEACHERS AND TEACHERS' WAGES.						LENGTH OF SCHOOLING.		HIGH SCHOOLS.							
	NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.		
	Men.	Women.														
			In high schools.	In elementary schools.												
Ashburnham, . . . . .	1	10	7	—	4	\$60 00	\$39 00	106	9-9	1	14	51	21	14	9-10	\$1,660 60
Athol, . . . . .	2	30	4	1	9	130 00	46 66	239-15	9-5	1	6	179	57	25	9-14	6,034 75
Auburn, . . . . .	—	10	—	—	3	—	43 30	90	9	—	—	—	—	—	—	—
Barre, . . . . .	1	16	3	1	12	120 00	39 50	136-1	9-13	1	4	59	24	12	10	3,145 00
Berlin, . . . . .	—	8	—	—	3	—	35 00	43-15	8-15	1	—	—	—	—	—	—
Blackstone, . . . . .	1	33	2	—	—	100 00	42 80	247-15	9-10	1	3	59	28	11	10	2,600 00
Bolton, . . . . .	—	5	2	—	2	—	44 40	36-6	9-2	1	2	28	9	3	9-17	1,236 40
Boylston, . . . . .	—	4	—	1	2	—	43 00	37-4	9-6	1	—	—	—	—	—	—
Brookfield, . . . . .	1	16	2	—	9	110 00	40 50	153-15	9-1	1	2	47	22	8	10	2,176 48
Brookfield, . . . . .	1	16	2	—	2	85 00	34 54	129-2	8-12	1	2	34	18	—	9-7	1,626 46
Clinton, . . . . .	2	52	5	—	12	110 00	52 45	441-11	9-7	1	8	202	72	38	9-8	7,727 69
Dana, . . . . .	—	5	—	—	3	—	50 50	45	9	—	—	—	—	—	—	—
Douglas, . . . . .	1	10	1	1	4	90 00	44 60	102-14	8-11	1	1	20	10	7	9-13	975 00
Dudley, . . . . .	3	16	3	—	7	128 00	37 25	133-4	8-17	1	3	34	6	5	10	1,381 74
Fitchburg, . . . . .	18	108	18	2	39	123 00	62 00	1,102	9-10	1	23	606	263	69	9-10	28,200 00
Gardner, . . . . .	2	49	12	1	22	145 00	56 46	339-7	8-19	1	12	332	78	45	9-15	13,370 00
Grafton, . . . . .	1	24	4	—	14	136 84	46 04	191-12	8-14	1	4	109	41	11	9-3	5,427 93
Hardwick, . . . . .	2	14	2	3	10	85 00	40 50	127	9-2	1	3	52	18	5	10	3,736 62
Harvard, . . . . .	—	5	—	—	3	—	44 00	47-4	9-9	1	3	31	15	6	9	3,050 00
Holden, . . . . .	1	17	2	—	8	102 56	39 00	141-18	8-17	1	3	62	18	9	9-16	2,146 30
Hopedale, . . . . .	1	12	2	—	6	120 00	63 27	119-10	9-19	1	2	47	23	5	10	2,644 38
Hubbardston, . . . . .	1	8	1	—	2	70 00	35 00	77-15	8-13	1	1	8	9	1	9-7	711 00
Lancaster, . . . . .	2	15	2	—	7	120 00	49 83	110	9-4	1	1	39	26	5	9-14	2,494 86
Leicester, . . . . .	4	17	2	1	10	81 00	42 38	169-5	8-18	1	3	72	24	7	9-15	4,736 36

# SCHOOL RETURNS.

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	60	8	28	136 25	52 99	455-1	9-14	11	283	104	39	9-18	14,015 56
Leominster, . . . . .	6	8	6	78 00	39 00	68-1	9-14	1	48	18	12	9-17	1,418 51
Lunenburg, . . . . .	1	2	2	90 00	41 66	55	9-5	2	31	8	3	10	1,647 58
Mendon, . . . . .	2	5	27	140 00	50 12	385-16	8-14	1	161	59	31	9-18	7,658 00
Millbury, . . . . .	2	3	19	110 00	39 73	165-17	8-15	1	85	39	10	10-4	2,660 56
New Braintree, . . . . .	4	3	5	-	39 66	36	9	-	-	-	-	-	-
Northborough, . . . . .	2	3	10	106 00	42 00	78-9	8-14	1	46	23	7	9-12	2,005 09
Northbridge, . . . . .	1	3	25	150 00	47 07	314	9-10	1	103	46	11	10	4,175 00
North Brookfield, . . . . .	1	3	2	107 00	42 64	99-11	9-1	3	92	16	16	10	2,453 00
Oakham, . . . . .	5	3	-	-	40 00	40	8	-	-	-	-	-	-
Paxton, . . . . .	2	2	15	74 00	39 87	145-16	9-2	1	45	11	13	10	1,831 00
Paxton, . . . . .	-	-	1	-	42 75	26-10	8-16	-	-	-	-	-	-
Petersham, . . . . .	3	1	5	-	43 00	55-16	9-6	1	7	1	-	9-6	1,140 66
Phillipston, . . . . .	4	2	3	70 00	35 60	36-17	9-4	-	-	3	4	9-11	1,808 50
Princeton, . . . . .	1	2	8	44 00	42 66	62-6	8-18	1	10	-	-	-	-
Royalston, . . . . .	1	2	5	64 00	40 00	50-2	8-7	1	34	5	3	9-17	1,240 00
Rutland, . . . . .	1	2	4	85 00	39 20	87-6	8-14	1	26	11	4	9-12	1,778 86
Shrewsbury, . . . . .	1	11	8	110 00	42 55	79-2	8-16	1	46	11	5	9-14	3,195 94
Southborough, . . . . .	3	37	8	85 00	42 44	297-12	9-12	1	123	39	16	9-13	4,758 00
Southbridge, . . . . .	3	31	8	90 53	45 53	264-2	9-2	1	111	40	24	9-10	5,386 00
Spencer, . . . . .	1	8	6	75 00	35 00	62-16	8-19	1	44	12	1	9-15	1,520 00
Sterling, . . . . .	-	2	-	-	40 00	110-6	9-3	-	-	-	-	-	-
Sturbridge, . . . . .	-	2	3	32 00	36 07	154	9-1	1	28	2	-	10	1,044 51
Sutton, . . . . .	1	19	7	95 00	36 85	144-14	8-10	1	62	22	8	9-16	2,468 49
Templeton, . . . . .	1	19	7	81 84	38 49	77-15	8-13	1	73	24	7	9-10	2,226 33
Upton, . . . . .	3	22	9	77 33	40 72	198	8-12	1	55	17	7	9-14	3,214 00
Uxbridge, . . . . .	3	16	8	86 42	42 90	140-8	8-15	1	95	41	19	9-14	4,160 18
Warren, . . . . .	3	25	9	120 00	45 66	208-16	9-19	1	78	22	13	9-17	6,318 61
Webster, . . . . .	2	17	8	87 50	54 20	130-1	8-15	1	89	36	9	9-8	3,810 58
Westborough, . . . . .	1	7	3	130 00	48 43	62-15	8-19	1	31	6	7	9-17	2,392 37
West Boylston, . . . . .	-	7	3	-	40 00	63-2	9	-	-	-	-	-	-
West Brookfield, . . . . .	-	-	-	-	33 66	97	8-1	1	29	11	11	9	600 00
Westminster, . . . . .	-	13	-	-	44 75	215-12	8-12	6	144	49	21	10	7,697 11
Winchendon, . . . . .	3	28	20	107 33	44 75	-	10	1	-	-	-	{ 10	117,026 32
Worcester, . . . . .	66	549	462	146 58	63 29	4,580	9-7	3	2,247	985	257	{ 10	8304,732 33
Totals, . . . . .	159	1,604	930	\$122 86	\$52 27	13,491-19	9-7	50	6,297	2,443	844	9-14	

1 Bromfield School.

## WORCESTER COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total public expenditure for such support diminished by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Ashburnham, . . . . .	\$5,503 92	\$251 60	\$839 09	\$163 75	\$651 84	\$511 28	\$124 97	\$8,046 45	\$2,094 80	\$5,951 65
Athol, . . . . .	16,690 63	1,604 75	3,768 37	35 00	2,041 65	2,087 39	1,560 73	27,788 52	1,363 07	26,425 45
Auburn, . . . . .	4,952 50	76 20	520 70	155 50	540 00	349 44	62 75	6,657 09	1,881 05	4,776 04
Barre, . . . . .	7,881 14	791 39	1,231 36	1 25	606 78	983 78	136 52	11,682 22	1,937 80	9,694 42
Berlin, . . . . .	3,181 60	395 42	601 27	74 50	232 70	202 92	109 46	4,797 87	2,454 81	2,343 06
Blackstone, . . . . .	14,017 42	—	2,000 00	60 00	888 00	1,174 00	65 64	18,205 06	690 16	17,514 90
Bolton, . . . . .	2,193 75	1,458 00	361 03	40 00	342 95	260 92	30 00	4,686 65	2,283 51	2,403 14
Boylston, . . . . .	2,039 60	1,418 20	724 83	76 00	285 47	178 88	28 44	4,751 42	1,526 75	3,224 67
Brookfield, . . . . .	7,301 80	165 19	1,520 23	170 00	750 00	645 37	65 46	10,618 05	1,787 12	8,830 93
Charlton, . . . . .	6,005 14	144 00	575 92	153 05	774 98	534 65	101 06	8,288 80	1,758 53	6,530 27
Clinton, . . . . .	31,573 72	—	6,914 83	1,400 00	1,800 00	4,184 93	2,384 22	48,257 70	—	48,257 70
Dana, . . . . .	2,144 75	681 90	435 65	14 25	360 90	296 42	5 00	3,938 87	1,969 91	1,968 96
Douglas, . . . . .	4,368 00	331 00	1,181 26	76 50	660 00	420 81	79 16	7,166 73	1,402 10	5,764 63
Dudley, . . . . .	7,742 10	—	976 13	98 00	666 67	623 03	162 30	10,268 23	1,321 29	8,946 94
Fitchburg, . . . . .	87,494 61	1,762 00	16,445 34	1,575 00	2,700 00	6,319 78	4,865 28	121,162 01	518 00	120,644 01
Gardner, . . . . .	27,770 00	1,010 00	6,517 25	41 00	2,100 00	4,251 20	2,033 23	43,722 68	467 46	43,255 22
Graton, . . . . .	11,950 75	3,284 56	3,455 59	253 63	1,318 75	1,236 75	218 20	21,718 23	1,988 68	19,729 55
Hardwick, . . . . .	7,715 58	2,301 16	1,486 19	90 00	557 05	712 56	182 45	13,141 69	1,628 70	11,512 99
Harvard, . . . . .	2,382 00	2,536 05	663 07	5 50	653 75	525 16	129 66	6,798 49	1,633 00	5,165 49
Holden, . . . . .	7,280 84	546 55	1,354 73	90 00	800 00	784 50	165 04	11,021 66	2,008 59	9,013 07
Hopedale, . . . . .	9,074 00	282 50	2,455 94	—	636 70	575 26	545 22	13,569 62	1,355 75	13,569 62
Hubbardston, . . . . .	3,278 00	592 00	366 00	89 00	308 00	218 00	—	4,851 00	1,000 00	3,495 25
Lancaster, . . . . .	7,842 50	1,002 50	2,193 09	100 00	1,070 00	1,435 11	275 80	13,919 00	1,000 00	12,919 00
Leicester, . . . . .	10,093 00	1,187 00	2,183 66	31 10	775 00	805 38	164 17	15,239 31	1,494 90	13,744 41

# SCHOOL RETURNS.

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Leominster, .	36,504 64	1,935 39	10,657 23	1,128 00	2,116 64	6,114 98	860 48	59,317 36	785 82	58,531 54
Lunenburg, .	3,854 97	365 00	594 25	155 50	510 00	335 66	42 00	5,857 38	1,506 73	4,350 65
Mendon, .	3,060 00	611 00	678 54	13 75	641 70	284 45	113 92	5,403 36	1,961 66	3,441 70
Millford, .	25,794 22	434 00	5,873 46	50 00	1,800 00	2,108 40	2,653 04	38,713 12	236 33	38,476 79
Millbury, .	10,763 50	282 00	966 49	150 00	960 00	808 51	557 52	14,488 02	994 87	13,493 15
New Braintree, .	1,389 50	354 00	233 00	21 00	450 00	174 00	50 00	2,671 50	1,664 13	1,007 37
Northborough, .	5,805 50	1,313 03	1,199 90	100 00	464 10	672 36	147 01	9,701 90	1,911 80	7,790 10
Northbridge, .	19,524 27	610 20	4,447 44	47 75	750 00	1,874 60	702 55	27,956 81	-	27,956 81
North Brookfield, .	6,196 00	1,667 00	826 78	60 00	635 42	766 24	320 28	10,471 72	1,913 51	8,558 21
Oakham, .	1,749 00	38 50	159 69	123 50	240 00	113 07	2 00	2,425 76	1,458 75	967 01
Oxford, .	7,730 62	269 00	1,976 00	187 00	640 00	883 02	712 52	12,398 16	1,055 00	11,343 16
Paxton, .	1,489 00	567 80	280 69	43 00	173 33	69 62	111 02	2,734 46	1,534 46	1,200 00
Petersham, .	3,438 39	1,853 35	563 17	60 00	287 29	399 24	365 17	6,966 61	1,457 59	5,509 02
Phillipston, .	1,848 00	323 00	109 00	48 00	150 00	122 66	22 40	2,623 06	1,650 35	972 71
Princeton, .	3,750 74	303 40	851 54	75 00	300 00	481 98	70 26	5,832 92	1,636 93	4,195 99
Royalston, .	3,073 10	790 45	597 57	100 00	300 00	372 23	-	5,233 35	1,965 75	3,267 60
Rutland, .	2,833 20	1,676 00	899 39	41 50	400 00	212 19	59 53	6,121 81	1,965 63	4,156 18
Shrewsbury, .	4,830 65	820 05	871 65	163 75	421 26	582 25	247 86	7,937 47	1,586 68	6,350 79
Southborough, .	5,880 00	1,576 00	1,887 10	150 00	456 96	818 66	410 99	11,179 71	1,788 13	9,391 58
Southbridge, .	16,651 05	188 15	3,974 44	135 25	825 00	1,654 23	768 32	24,196 44	900 00	23,296 44
Spencer, .	15,744 17	745 66	3,821 16	104 14	1,600 00	1,679 91	774 42	24,469 46	467 47	21,001 99
Sterling, .	4,013 10	724 60	393 38	71 09	600 00	391 84	25 58	6,219 59	2,181 13	4,038 46
Sturbridge, .	5,174 00	1,230 38	771 77	-	609 78	419 66	-	8,205 59	2,184 50	6,021 09
Sutton, .	5,688 70	366 50	1,236 26	170 01	960 00	549 15	188 54	9,159 16	2,010 82	7,148 34
Templeton, .	6,800 01	1,331 50	1,610 78	152 00	750 00	709 48	27 50	11,381 27	1,571 46	9,809 81
Upton, .	4,827 60	790 74	1,128 50	12 44	439 54	493 24	92 12	7,484 18	1,495 63	5,988 55
Uxbridge, .	10,881 97	7 50	2,698 79	14 50	990 00	1,140 61	526 35	16,259 72	1,565 25	14,694 47
Warren, .	9,454 67	2,237 45	2,256 55	50 00	1,200 00	1,184 64	402 65	16,785 96	2,925 63	13,860 33
Webster, .	15,282 70	251 50	4,485 62	200 00	1,333 30	813 25	522 44	22,888 81	-	22,888 81
Westborough, .	10,186 61	1,919 29	2,029 73	50 00	600 00	988 46	671 56	16,445 65	20 45	16,425 20
West Boylston, .	4,944 40	1,872 00	1,075 67	115 00	756 25	446 81	65 43	9,275 56	1,897 96	7,377 60
West Brookfield, .	3,609 93	844 75	484 32	-	453 75	340 23	204 53	5,937 51	1,457 40	4,480 11
Westminster, .	3,416 50	500 00	480 18	82 66	600 00	259 78	69 38	5,408 50	1,607 88	3,800 62
Winchendon, .	16,455 40	1,187 90	4,313 87	174 65	1,175 79	1,981 18	1,611 00	26,899 79	8,557 78	18,342 01
Worcester, .	471,694 28	717 00	85,999 15	8,538 74	4,000 00	33,740 89	6,944 12	611,634 18	4,141 12	607,493 06
Totals, .	\$1,044,517 74	\$52,576 06	\$209,204 59	\$17,381 26	\$50,111 30	\$93,305 00	\$33,837 25	\$1,500,933 20	\$94,624 58	\$1,406,308 62

## WORCESTER COUNTY — CONTINUED.

TOWNS AND CITIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for school buildings, that is, for all school purposes.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income voluntarily appropriated to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Ashburnham, . . . . .	\$25,000 00	-	\$41 08	\$25,041 08	\$25,000 00	\$41 08	\$5,992 73	-	\$35 15	-
Athol, . . . . .	-	\$665 28	623 44	1,288 72	-	1,288 72	27,714 17	\$1,000 00	-	\$398 58
Auburn, . . . . .	-	300 00	296 97	596 97	-	596 97	5,373 01	-	-	357 08
Barre, . . . . .	1,862 03	284 67	226 03	2,372 73	-	2,372 73	12,067 15	1,500 00	52 73	-
Berlin, . . . . .	-	3,404 17	-	3,404 17	-	3,404 17	5,747 23	-	-	-
Blackstone, . . . . .	-	-	1,330 02	1,330 02	-	1,330 02	18,844 92	-	-	-
Bolton, . . . . .	-	-	210 80	210 80	-	210 80	2,613 94	12,000 00	508 78	-
Boylston, . . . . .	-	-	55 66	55 66	-	55 66	3,280 33	-	-	-
Brookfield, . . . . .	-	126 08	193 52	319 60	-	319 60	9,150 53	-	-	376 19
Brookline, . . . . .	-	-	249 88	249 88	-	249 88	6,780 15	2,161 81	75 64	502 87
Charlton, . . . . .	-	-	1,737 27	1,737 27	-	1,737 27	49,994 97	-	-	-
Clinton, . . . . .	-	-	43 38	43 38	-	43 38	2,012 34	-	-	143 42
Dana, . . . . .	-	-	163 85	250 88	-	250 88	6,015 51	941 33	56 48	-
Douglas, . . . . .	-	87 03	288 83	8,968 83	-	8,968 83	17,915 77	-	-	384 38
Dudley, . . . . .	8,602 52	77 48	-	38,734 01	-	38,734 01	159,378 02	-	-	-
Fitchburg, . . . . .	35,609 40	-	3,124 61	38,734 01	-	38,734 01	45,707 62	-	-	-
Gardner, . . . . .	-	-	2,452 40	2,452 40	-	2,452 40	20,937 21	-	-	-
Grafton, . . . . .	-	929 89	277 77	1,207 66	-	1,207 66	12,433 37	-	-	1,791 88
Hardwick, . . . . .	-	213 65	706 73	920 38	-	920 38	5,214 64	-	-	207 58
Harvard, . . . . .	-	-	49 15	49 15	-	49 15	9,682 77	-	-	453 60
Holden, . . . . .	-	-	669 70	669 70	-	669 70	14,530 51	3,666 66	202 00	-
Hopevale, . . . . .	-	101 60	859 29	960 89	-	960 89	3,903 25	-	-	-
Hubbardston, . . . . .	-	-	408 00	408 00	-	408 00	13,621 28	1,200 00	72 00	-
Lancaster, . . . . .	-	504 43	197 85	702 28	-	702 28	15,280 97	-	-	574 78
Leicester, . . . . .	-	1,033 39	503 17	1,536 56	-	1,536 56	-	-	-	-



## SCHOOL RETURNS.

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Leominster, . . . . .	83,248 78	1,480 52	1,452 29	86,181 59	-	86,181 59	144,713 13	13,000 00	570 00	-
Lunenburg, . . . . .	-	-	201 42	201 42	-	201 42	4,552 07	-	-	-
Mendon, . . . . .	-	-	40 66	40 66	-	40 66	3,482 36	-	-	203 66
Milford, . . . . .	-	-	1,522 80	1,522 80	-	1,522 80	39,999 59	-	-	-
Millbury, . . . . .	-	695 00	739 37	1,434 37	-	1,434 37	14,927 52	-	-	-
New Braintree, . . . . .	-	-	-	-	-	-	1,007 37	-	-	-
Northborough, . . . . .	-	-	429 99	429 99	-	429 99	8,220 09	5,400 00	270 00	-
Northbridge, . . . . .	107,266 55	893 83	1,468 99	109,629 37	67,266 55	42,362 82	70,319 63	-	-	722 90
North Brookfield, . . . . .	-	-	312 16	312 16	-	312 16	8,870 37	-	-	386 57
Oakham, . . . . .	-	-	75 55	75 55	-	75 55	1,042 56	-	-	156 55
Oxford, . . . . .	-	-	497 57	497 57	-	497 57	11,840 73	1,200 00	48 00	-
Paxton, . . . . .	-	-	-	-	-	-	1,200 00	-	-	-
Petersham, . . . . .	23,000 00	-	-	23,000 00	23,000 00	-	5,509 02	781 68	31 50	170 35
Phillipston, . . . . .	-	-	122 14	122 14	-	122 14	1,094 85	-	-	86 81
Princeton, . . . . .	5,236 59	-	174 58	5,411 17	-	5,411 17	9,607 16	-	-	241 02
Royalston, . . . . .	-	-	264 58	264 58	-	264 58	3,532 18	6,500 00	296 88	135 41
Rutland, . . . . .	-	-	57 94	57 94	-	57 94	4,214 12	-	-	-
Shrewsbury, . . . . .	-	-	687 07	687 07	-	687 07	7,037 86	1,000 00	35 15	-
Southborough, . . . . .	-	219 97	-	219 97	-	219 97	9,611 55	-	-	201 02
Southbridge, . . . . .	35 00	-	886 90	921 90	-	921 90	24,218 34	-	-	-
Spencer, . . . . .	-	-	2,767 99	2,767 99	-	2,767 99	26,769 98	-	-	657 93
Sterling, . . . . .	-	-	213 06	213 06	-	213 06	4,251 52	15,043 17	574 48	151 52
Sturbridge, . . . . .	-	-	196 01	196 01	-	196 01	6,217 10	-	-	357 68
Sutton, . . . . .	-	-	285 87	285 87	-	285 87	7,434 21	2,000 00	114 00	396 76
Templeton, . . . . .	-	-	454 39	454 39	-	454 39	10,264 20	-	-	514 33
Upton, . . . . .	166 49	-	129 30	295 79	-	295 79	6,284 34	-	-	357 08
Uxbridge, . . . . .	-	-	988 32	988 32	-	988 32	15,682 79	-	-	-
Warren, . . . . .	-	-	467 41	611 12	-	611 12	14,471 45	-	-	-
Webster, . . . . .	-	143 71	1,312 51	1,422 76	-	1,422 76	24,311 57	-	-	981 55
Westborough, . . . . .	12,999 40	3,834 84	590 12	17,424 36	-	17,424 36	33,849 56	-	-	-
West Boylston, . . . . .	-	-	534 02	534 02	-	534 02	7,911 62	-	-	7,700 06
West Brookfield, . . . . .	-	-	343 45	343 45	-	343 45	4,823 56	-	-	-
Westminster, . . . . .	-	-	195 28	195 28	-	195 28	3,905 90	-	-	-
Winchendon, . . . . .	-	1,900 00	1,125 25	3,025 25	-	2,666 18	21,008 19	275,000 00	8,378 29	-
Worcester, . . . . .	-	10,992 99	23,731 63	50,755 96	359 07	50,605 18	658,098 24	2,000 00	88 29	-
Totals, . . . . .	\$318,856 61	\$28,200 27	\$56,978 02	\$404,034 90	\$115,776 40	\$288,288 50	\$1,601,567 12	\$344,394 65	\$11,409 37	\$18,611 56

BOARD OF EDUCATION.

WORCESTER COUNTY — CONCLUDED.

TOWNS AND CITIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN —		FUNDS WHOSE INCOME MUST BE APPROPRIATED TO ACADEMIES OR PRIVATE SCHOOLS.	
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.	Principal.	Income.
Ashburnham, .	\$995 62	\$25 00	1	128			\$7,582 00		\$352,367 00	\$12,718 00
Athol, .	—	—	—	—	—	—	—	—	—	—
Auburn, .	995 62	—	—	—	—	—	—	—	—	—
Barre, .	1,077 50	—	—	—	—	—	—	—	—	—
Berlin, .	1,227 50	—	—	—	—	—	—	—	—	—
Blackstone, .	1,002 50	—	—	—	—	—	—	—	—	—
Bolton, .	1,195 62	—	—	—	—	—	—	—	—	—
Boylston, .	1,427 50	—	—	—	—	—	—	—	—	—
Brookfield, .	1,077 50	—	—	—	—	—	—	—	—	—
Charlton, .	845 62	31 00	—	—	—	—	—	—	25,000 00	—
Clinton, .	—	—	—	—	1	443	—	—	—	—
Dana, .	1,427 50	—	—	—	—	—	—	—	—	—
Douglas, .	845 62	—	—	—	—	—	—	—	—	—
Dudley, .	845 62	—	1	34	—	—	639 45	—	33,000 00	1,900 00
Fitchburg, .	—	—	—	—	5	2,103	—	\$3,400 00	—	—
Gardner, .	—	—	—	—	1	604	—	—	—	—
Grafton, .	1,002 50	—	—	—	—	—	—	—	—	—
Hardwick, .	1,077 50	—	—	—	1	210	—	—	—	—
Harvard, .	1,077 50	—	—	—	—	—	—	—	—	—
Holden, .	1,077 50	—	—	—	—	—	—	—	—	—
Hopedale, .	—	—	—	—	—	—	—	—	—	—
Hubbardston, .	995 62	—	—	—	—	—	—	—	—	—
Lancaster, .	—	650 00	1	230	—	—	6,000 00	—	30,000 00	—
Leicester, .	1,002 50	—	—	—	—	—	—	—	70,000 00	3,200 00

## SCHOOL RETURNS.

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Leominster, . . . . .	-	-	-	-	9	1	-	-	-	25,000 00	-	-
Lunenburg, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Mendon, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Milford, . . . . .	-	-	-	-	386	1	-	-	-	-	-	-
Millbury, . . . . .	770 63	-	-	1	-	-	-	-	-	15,000 00	-	1,000 00
New Braintree, . . . . .	1,195 63	-	-	-	-	-	-	-	-	-	-	-
Northborough, . . . . .	845 63	-	-	-	-	-	-	-	-	-	-	-
Northbridge, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
North Brookfield, . . . . .	1,077 50	-	-	-	90	1	-	-	-	-	-	-
Oakham, . . . . .	963 75	-	-	-	-	-	-	-	-	-	-	-
Oxford, . . . . .	1,077 50	-	-	-	-	-	-	-	-	-	-	-
Paxton, . . . . .	1,036 50	-	-	-	-	-	-	-	-	-	-	-
Petersham, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Phillipston, . . . . .	1,056 50	-	-	-	-	-	-	-	-	-	-	-
Princeton, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Royalston, . . . . .	1,427 50	-	-	-	-	-	-	-	-	-	-	-
Rutland, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Shrewsbury, . . . . .	845 63	-	-	-	-	-	-	-	-	-	-	-
Southborough, . . . . .	1,077 50	-	-	1	64	1	-	19,800 00	9,600 00	15,000 00	-	600 00
Southbridge, . . . . .	-	-	-	131	1,023	2	-	-	-	-	-	-
Spencer, . . . . .	22 00	-	-	-	397	1	-	-	1,400 00	-	-	-
Sterling, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Sturbridge, . . . . .	856 50	-	-	-	-	-	-	-	-	-	-	-
Sutton, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Templeton, . . . . .	1,077 50	-	-	-	-	-	-	-	350 00	-	-	-
Upton, . . . . .	1,077 50	-	-	-	-	-	-	-	-	-	-	-
Uxbridge, . . . . .	845 63	-	-	-	-	-	-	-	-	-	-	-
Warren, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Webster, . . . . .	1,077 50	-	-	-	-	-	-	-	-	-	-	-
Westborough, . . . . .	-	-	-	-	1,192	4	-	-	2,857 50	-	-	-
West Boylston, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
West Brookfield, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Westminster, . . . . .	1,227 50	-	-	-	-	-	-	-	-	-	-	-
Winchendon, . . . . .	995 63	-	-	-	-	-	-	-	-	-	-	-
Worcester, . . . . .	-	-	-	266	4,884	15	-	14,250 00	7,300 00	709,900 00	14,950 75	-
Totals. . . . .	\$45,645 76	\$2,865 57	6	899	11,405	34	\$48,271 45	\$24,907 50	\$1,275,267 00	\$34,368 75	-	-

## BOARD OF EDUCATION.

## RECAPITULATION.

COUNTIES.	SCHOOL CENSUS DATA SEPT. 1, 1906.			SCHOOL MEMBERSHIP, ATTENDANCE AND GRADUATION DATA FOR THE SCHOOL YEAR.							
	No. of persons in towns be- tween 5 and 15 years of age.	No. of persons in towns be- tween 7 and 14 years of age.	No. of different pupils of all ages in the public schools during the school year.	No. of different pupils with- in the year under 5 years of age.	No. of different pupils with- in the year over 15 years of age.	No. of different pupils with- in the year between 7 and 14 years of age.	Average membership of all the schools.	Average attendance of all the schools.	Percentage of attendance based on average mem- bership.	No. graduated from gram- mar schools.	
Barnstable, . . . . .	4,290	3,223	4,903	33	601	3,298	4,457	4,107	.92	283	
Berkshire, . . . . .	17,959	13,104	17,191	394	1,547	11,498	15,061	13,925	.92	618	
Bristol, . . . . .	49,973	35,601	43,115	504	2,826	29,892	37,348	34,452	.92	1,151	
Dukes, . . . . .	779	562	784	4	104	548	707	644	.91	46	
Essex, . . . . .	67,145	49,585	61,598	1,170	5,961	39,010	53,885	50,216	.93	2,628	
Franklin, . . . . .	7,408	5,370	7,733	92	655	5,393	6,947	6,473	.93	423	
Hampden, . . . . .	35,747	25,307	33,067	1,636	2,792	20,876	28,412	26,303	.93	1,221	
Hampshire, . . . . .	10,466	7,558	10,834	221	997	7,213	9,561	8,905	.93	440	
Middlesex, . . . . .	104,424	75,173	107,768	2,638	11,622	68,592	97,149	90,346	.93	5,096	
Nantucket, . . . . .	414	296	544	4	99	236	369	324	.88	27	
Norfolk, . . . . .	30,771	22,440	31,731	946	3,166	20,380	28,517	26,320	.92	1,675	
Plymouth, . . . . .	20,895	15,399	22,877	101	2,172	15,165	20,703	19,306	.93	1,183	
Suffolk, . . . . .	115,752	80,698	116,962	3,006	10,785	66,929	104,012	94,689	.91	4,863	
Worcester, . . . . .	65,054	47,189	60,522	1,157	5,671	40,066	53,208	49,178	.92	2,258	
Totals, . . . . .	531,077	381,705	519,632	11,906	48,998	329,096	460,336	425,188	.92	21,912	

# SCHOOL RETURNS.

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## RECAPITULATION — CONTINUED.

COUNTIES.	TEACHERS AND TEACHERS' WAGES.				LENGTH OF SCHOOLING.				HIGH SCHOOLS.							
	NUMBER OF TEACHERS REQUIRED BY THE PUBLIC SCHOOLS.		NUMBER OF TEACHERS WHO HAVE GRADUATED FROM COLLEGE.		No. of teachers who have graduated from normal schools.	Average wages per month of male teachers.	Average wages per month of female teachers.	Aggregate of months all the public schools have been kept during the school year.	Average number of months public schools have been kept during the year.	No. of high schools.	No. of teachers.	No. of pupils.	No. of new pupils admitted during the year.	No. of graduates.	Length of schooling.	Expenditures for high school support.
	Men.	Women.	In high schools.	In elemen- tary schools.												
Barnstable, . . . . .	26	148	27	4	85	\$79 25	\$43 20	1,316-2	9	14	32	675	206	114	9-10	\$34,007 66
Berkshire, . . . . .	39	554	47	10.	213	109 97	44 97	4,464-5	9-5	10	54	1,455	544	192	9-12	62,886 96
Bristol, . . . . .	73	1,104	68	28	356	132 06	53 00	8,938-18	9-10	14	89	2,416	905	363	9-13	124,994 72
Dukes, . . . . .	4	26	7	1	11	73 28	44 15	221-9	8-17	3	6	86	31	12	9-5	4,728 45
Essex, . . . . .	121	1,619	199	44	642	134 24	54 16	12,903-17	9-10	28	250	6,210	2,380	786	9-12	292,328 22
Franklin, . . . . .	11	289	36	6	109	115 00	40 12	2,329-15	8-17	11	41	953	349	143	9-11	40,032 70
Hampden, . . . . .	72	894	101	55	537	141 27	62 20	7,426-1	9-10	11	126	2,795	1,042	373	9-14	164,752 22
Hampshire, . . . . .	25	341	48	33	122	91 44	42 35	2,876-10	9-1	12	47	1,116	366	171	9-12	46,318 38
Middlesex, . . . . .	256	2,726	285	122	1,383	153 52	62 53	21,263-14	9-6	48	373	12,161	4,542	1,788	9-11	616,486 82
Nantucket, . . . . .	1	17	1	-	4	100 00	33 30	107-4	9-15	1	4	86	-	-	10	3,300 00
Norfolk, . . . . .	89	848	130	30	412	132 62	58 17	6,814-7	9-6	27	157	3,759	1,351	533	9-13	190,011 43
Plymouth, . . . . .	62	585	83	12	316	111 27	53 53	4,965-5	9-5	21	112	2,634	995	371	9-11	122,167 00
Suffolk, . . . . .	307	2,449	184	97	1,903	217 04	72 80	19,601-12	9-10	16	327	9,294	4,155	1,910	9-7	698,066 14
Worcester, . . . . .	159	1,604	223	41	930	122 86	52 27	13,491-19	9-7	50	268	6,297	2,443	844	9-14	304,732 33
Totals, . . . . .	1,245	13,204	1,439	483	7,023	\$153 02	\$58 62	106,720-18	9-7	266	1,886	49,937	19,309	7,600	9-11	\$2,704,813 03

## BOARD OF EDUCATION.

## RECAPITULATION — CONTINUED.

COUNTIES.	EXPENDITURES FOR THE SUPPORT OF PUBLIC SCHOOLS.							Total expenditure for the support of public schools, being the total of the seven preceding columns.	Amount included in the total expenditure as given in the preceding column, but derived from other sources than local taxation, such as aid from the State, voluntary contributions, income from local funds, etc.	Amount raised by local taxation and expended for the support of public schools, being the total expended by contributions from other sources than local taxation.
	Teachers' wages.	Conveyance of pupils.	Fuel and care of school premises.	School committee, including clerical aid and truant service.	Superintendent and assistants.	Text-books and school supplies.	School sundries.			
Barnstable, . . . . .	\$83,625 16	\$13,958 58	\$15,337 40	\$1,293 33	\$9,239 67	\$8,840 03	\$4,170 69	\$136,464 86	\$23,432 30	\$113,032 56
Berkshire, . . . . .	288,329 62	10,008 80	58,991 63	5,507 51	22,761 45	25,738 54	11,958 03	423,295 58	44,058 01	379,237 57
Bristol, . . . . .	712,684 10	14,434 17	146,793 46	14,737 53	23,570 24	52,130 92	31,678 73	996,029 15	54,540 53	941,488 62
Dukes, . . . . .	13,508 80	914 80	2,433 90	388 25	1,743 13	1,540 15	829 77	21,358 80	7,813 14	13,545 66
Essex, . . . . .	1,065,787 24	19,028 29	195,255 36	19,058 46	37,941 41	104,965 21	32,524 31	1,473,660 28	35,990 19	1,437,670 09
Franklin, . . . . .	127,088 67	18,900 14	21,911 47	1,319 83	14,624 11	11,645 61	4,132 41	199,622 24	46,288 59	153,333 65
Hampden, . . . . .	647,317 82	13,496 56	124,663 49	15,570 78	24,794 50	68,589 98	27,202 97	921,636 10	50,942 57	870,693 53
Hampshire, . . . . .	166,580 43	8,527 06	30,874 20	2,257 22	15,039 55	16,137 14	6,369 51	245,785 11	43,930 72	201,854 39
Middlesex, . . . . .	2,138,225 20	50,351 09	414,324 56	31,083 58	65,013 74	164,459 81	80,912 43	2,944,370 41	76,775 51	2,867,594 90
Nantucket, . . . . .	6,397 00	120 00	958 01	34 11	—	919 65	261 39	8,690 16	—	8,690 16
Norfolk, . . . . .	606,451 90	26,216 72	133,300 72	7,723 08	32,864 71	66,520 38	30,712 67	903,790 18	28,015 15	875,775 03
Plymouth, . . . . .	381,101 74	21,659 68	77,773 46	4,667 34	21,388 84	33,220 96	17,324 25	557,136 27	37,728 97	519,407 30
Suffolk, . . . . .	3,021,272 02	2,259 16	396,440 78	64,406 82	32,312 67	107,736 11	95,699 50	3,720,127 06	55,946 95	3,664,180 11
Worcester, . . . . .	1,044,517 74	52,576 06	209,204 59	17,381 26	50,111 30	93,305 00	33,837 25	1,500,933 20	94,624 58	1,406,308 62
Totals, . . . . .	\$10,302,887 44	\$252,451 11	\$1,828,263 03	\$185,429 10	\$350,505 32	\$755,749 49	\$377,613 91	\$14,052,899 40	\$600,087 21	\$13,452,812 19

# SCHOOL RETURNS.

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## RECAPITULATION — CONTINUED.

COUNTIES.	EXPENDITURES FOR SCHOOL BUILDINGS.			Total expenditure for school buildings, being the total of the three preceding columns.	Amount included in the total expenditure for school buildings as given in the preceding column, but derived from other sources than local taxation.	Amount raised by local taxation and expended for school buildings.	Amount raised by local taxation and expended for support of the public schools and for school purposes, that is, for all school buildings.	LOCAL FUNDS WHOSE INCOME MUST BE APPROPRIATED TO THE PUBLIC SCHOOLS.		Dog tax and other income to the public schools.
	New schoolhouses.	Alterations and permanent repairs.	Ordinary repairs.					Principal.	Income.	
Barnstable, . . . . .	\$2,000 00	\$2,453 00	\$6,000 91	\$10,453 91	-	\$10,453 91	\$123,486 47	\$36,233 00	\$1,802 32	\$1,412 46
Berkshire, . . . . .	20,254 91	20,786 57	14,086 28	55,127 76	\$3 00	55,124 76	434,362 33	4,887 00	245 02	3,076 50
Bristol, . . . . .	110,898 01	10,351 30	48,791 67	170,040 98	-	170,040 98	1,111,529 60	213,500 00	13,520 09	11,440 75
Dukes, . . . . .	-	599 93	255 21	855 14	-	855 14	14,400 80	-	-	398 16
Essex, . . . . .	223,942 94	127,371 31	73,333 35	424,647 60	300 20	424,347 40	1,862,017 49	199,357 46	8,820 41	8,284 78
Franklin, . . . . .	18,842 18	3,158 12	5,136 86	27,137 16	696 74	26,440 42	179,774 07	59,368 50	2,329 22	883 62
Hampden, . . . . .	292,335 79	23,989 21	22,722 60	339,047 60	8 92	339,038 68	1,209,732 21	38,457 80	1,836 07	5,090 53
Hampshire, . . . . .	9,114 49	9,554 91	10,395 20	29,064 60	243 66	28,820 94	230,675 33	23,604 00	1,034 30	3,601 01
Middlesex, . . . . .	495,917 29	78,242 98	114,223 47	688,383 74	\$1,215 97	607,167 77	3,474,762 67	116,086 59	4,918 05	10,438 76
Nantucket, . . . . .	-	1,131 71	365 50	1,497 21	-	1,497 21	10,187 37	-	-	339 80
Norfolk, . . . . .	57,101 37	135,618 56	35,730 49	228,450 42	737 81	227,712 61	1,103,487 64	51,266 37	2,302 93	6,389 09
Plymouth, . . . . .	204,849 71	32,630 08	26,837 27	264,317 06	112,112 23	152,204 83	671,612 13	34,183 50	1,409 68	8,500 68
Suffolk, . . . . .	745,372 65	299,737 74	16,604 09	1,061,714 48	-	1,061,714 48	4,725,894 59	127,975 00	5,231 18	54,423 31
Worcester, . . . . .	318,856 61	28,200 27	56,978 02	404,034 90	115,776 40	288,258 50	1,694,567 12	344,394 65	11,409 37	18,611 56
Totals, . . . . .	\$2,499,485 95	\$773,825 69	\$431,460 92	\$3,704,772 56	\$311,094 93	\$3,393,677 63	\$16,846,489 82	\$1,249,313 87	\$54,858 64	\$132,891 01

## RECAPITULATION — CONCLUDED.

COUNTIES.	Town's share of school fund income paid Jan. 25, 1907.	Amount of voluntary contributions expended on the public schools but not included in expenditures by the town or city.	ACADEMIES AND PRIVATE SCHOOLS.				ESTIMATED AMOUNT OF TUITION PAID IN—		FUNDS WHOSE INCOME MUST BE APPROPRIATED TO ACADEMIES OR PRIVATE SCHOOLS.	
			No. of academies.	No. of different academy pupils attending during the year.	No. of private schools.	No. of different private school pupils attending during the year.	Academies.	Private schools.	Principal.	Income.
Barnstable,	\$11,148 24	\$374 00	1	1	1	1	—	—	—	—
Berkshire,	24,370 87	528 91	—	—	9	2,750	—	\$18,785 00	\$45,000 00	—
Bristol, .	11,340 25	3,961 75	1	246	27	10,476	\$22,920 07	7,152 00	834,775 00	\$29,611 97
Dukes, .	5,336 12	—	1	—	1	—	—	—	—	—
Essex, .	12,085 52	1,012 00	5	794	47	13,590	80,310 61	57,439 00	897,801 89	20,618 21
Franklin,	24,304 88	520 00	2	1,158	1	237	88,359 68	—	1,791,503 74	37,001 13
Hampden,	17,172 77	1,174 65	2	241	26	9,059	10,368 50	19,525 00	463,645 94	11,618 08
Hampshire,	19,243 74	—	3	409	6	1,146	26,300 00	150 00	766,700 00	77,980 47
Middlesex,	26,376 76	2,295 90	10	963	55	15,764	276,440 00	116,755 75	499,081 90	16,894 27
Nantucket,	—	—	—	—	—	—	—	—	60,000 00	2,700 00
Norfolk,	13,077 14	831 83	3	460	15	2,600	32,191 46	126,160 00	1,070,434 00	51,095 60
Plymouth,	14,366 26	705 00	3	105	4	1,062	6,286 00	8,560 00	473,803 65	17,943 11
Suffolk, .	—	1,613 72	4	475	90	23,368	28,985 64	450,618 13	3,266,054 73	140,109 46
Worcester,	45,645 76	2,865 57	6	899	34	11,405	48,271 45	24,907 50	1,275,267 00	34,368 75
Totals,	\$224,468 31	\$15,883 33	41	5,750	314	91,457	\$620,433 41	\$830,052 38	\$11,444,067 85	\$439,941 05



## SCHOOL RETURNS.

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## EVENING SCHOOLS.

CITIES AND TOWNS.	No. of schools.	ATTENDANCE.			Time. Average No. of evenings.	No. of teachers.	Expense.
		Males.	Females.	Average.			
Adams, . . . . .	2	150	184	110	42	10	\$972 90
Attleborough, . . . . .	4	237	140	199	36	16	880 77
Beverly, . . . . .	11	211	140	212	35	12	2,275 00
Boston, . . . . .	24	6,224	4,726	7,979	88	336	124,646 64
Brockton, . . . . .	6	723	231	445	51	28	3,489 80
Brookline, . . . . .	5	113	96	107	50	11	2,211 53
Cambridge, . . . . .	8	1,418	1,114	1,104	65	88	14,829 93
Chelsea, . . . . .	1	498	309	365	50	18	2,434 92
Chicopee, . . . . .	3	316	189	357	40	31	2,170 42
Clinton, . . . . .	2	203	62	145	80	10	1,334 25
Dudley, . . . . .	2	34	36	29	48	4	262 65
Easthampton, . . . . .	11	75	76	86	30	11	382 80
Everett, . . . . .	4	152	96	103	81	9	2,116 65
Fall River, . . . . .	21	2,337	1,300	1,869	57	172	11,648 66
Fitchburg, . . . . .	5	454	102	193	46	20	2,500 00
Frammingham, . . . . .	1	146	56	80	54	10	1,037 64
Gardner, . . . . .	1	261	42	212	28	35	942 40
Gloucester, . . . . .	1	30	22	23	24	3	100 00
Greenfield, . . . . .	3	58	28	30	44	5	351 50
Hatfield, . . . . .	1	20	-	10	35	1	46 01
Haverhill, . . . . .	5	534	210	322	60	32	2,559 50
Holyoke, . . . . .	6	742	540	621	51	60	5,877 75
Hyde Park, . . . . .	3	157	109	113	60	7	1,256 64
Lawrence, . . . . .	5	1,567	1,041	1,126	73	85	11,818 61
Leominster, . . . . .	1	234	66	148	44	19	1,383 25
Lowell, . . . . .	19	2,754	1,429	2,152	70	170	24,200 00
Lynn, . . . . .	3	1,368	454	523	47	46	3,998 21
Malden, . . . . .	3	510	274	328	60	27	4,252 93
Marlborough, . . . . .	6	129	26	74	50	7	522 56
Maynard, . . . . .	3	79	10	59	43	3	167 00
Medford, . . . . .	3	215	73	77	69	7	1,200 00
Milford, . . . . .	1	291	70	166	48	12	1,000 00
Millbury, . . . . .	1	47	-	75	83	2	312 20
New Bedford, . . . . .	6	1,633	1,038	1,383	40	74	6,411 20
Newburyport, . . . . .	2	50	16	21	20	6	152 50
Newton, . . . . .	3	327	82	207	44	11	1,790 86
North Adams, . . . . .	4	180	131	214	40	14	1,500 00
Northampton, . . . . .	4	95	69	109	49	13	1,008 40
North Attleborough, . . . . .	1	124	41	38	33	4	240 00
Northbridge, . . . . .	2	137	53	128	34	9	739 31
Oxford, . . . . .	2	45	28	43	48	4	267 50
Peabody, . . . . .	1	153	3	52	39	7	425 00
Pittsfield, . . . . .	9	173	114	127	49	9	975 57
Plymouth, . . . . .	2	121	90	153	60	10	736 24
Quincy, . . . . .	3	386	46	143	40	11	1,500 00
Salem, . . . . .	4	426	167	198	47	29	2,951 37
Somerville, . . . . .	5	698	605	478	85	43	11,851 39
Southbridge, . . . . .	4	128	121	183	38	12	726 21
Spencer, . . . . .	1	28	9	27	38	3	154 22
Springfield, . . . . .	7	1,529	737	943	78	90	16,066 89
Sutton, . . . . .	1	31	11	29	76	2	152 00
Taunton, . . . . .	9	387	147	335	39	25	2,148 50
Wakefield, . . . . .	1	109	50	103	60	8	712 34
Waltham, . . . . .	3	262	150	180	50	13	2,068 00
Watertown, . . . . .	1	65	-	19	60	2	180 00
Webster, . . . . .	1	95	74	61	50	6	446 75
Westfield, . . . . .	1	177	74	90	40	7	388 67
Woburn, . . . . .	5	267	38	56	38	9	555 18
Worcester, . . . . .	16	1,909	754	1,332	112	115	27,923 85
Totals, . . . . .	273	31,822	17,899	26,094	52	1,843	\$315,255 07

## RETURNS OF SCHOOLS IN STATE INSTITUTIONS FOR THE SCHOOL YEAR 1906-1907.

STATE INSTITUTIONS.	No. of schools in the institution.	No. of different scholars of all ages during the year.	Average attendance during the year.	No. under 5 years of age attending school.	No. over 15 years of age attending school.	No. between 5 and 15 years in the institution at the end of the school year.	No. of Teachers during the Year.		WAGES OF TEACHERS PER MONTH.		Length of each school.
							Males.	Females.	Males.	Females.	
State Industrial School for Girls, . . .	9	397	228	-	360	37	-	11	-	\$25 00 <sup>1</sup> to \$33 33 <sup>1</sup>	10 mos.
Lyman School for Boys at Westborough, . .	9	627	329	-	126	216	\$66 66 <sup>1</sup> to \$83 33 <sup>1</sup>	13	\$66 66 <sup>1</sup> to \$83 33 <sup>1</sup>	\$25 00 <sup>1</sup> to \$66 66 <sup>1</sup>	44 wks.

<sup>1</sup> And home.

## GRADUATED TABLES.

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In order to show the comparative standing of the towns and cities (1) in the taxes which they impose upon themselves for the support of their public schools, (2) in the ratio which these taxes bear to their respective valuations, and (3) in the ratio of the attendance upon the public schools to the whole number of children between five and fifteen, three graduated tables have been prepared.

For the sake of brevity as well as convenience of reference these tables may be named as follows:—

- I. Graduated taxation table.
- II. Graduated valuation table.
- III. Graduated attendance table.

I. *Graduated Taxation Table.*

In this table the towns and cities are classified or ranked according to the amounts which they severally raise by local taxation for the school support of each child in the average membership of the public schools. It is the average membership that more than any other factor determines the expense of the schools, and it is the expenditure for each child in the average membership that more than any other factor determines a town's liberality in matters of school support. In some places large numbers of children between five and fifteen are in private schools; the amount raised for the public schools is correspondingly reduced. Consequently the amounts of the local tax for each child between five and fifteen in such places are relatively small. To use such amounts, however, as evidence of the economy or the parsimony of towns would be illogical and unjust.

Advantage is taken of this table to present important data not given in reports previous to the sixty-sixth. They are the amounts yielded for each child in the average membership by the local tax *plus* the State and other contributions. In the column next to the last, the amounts measure the local taxation burden for each child in the average membership. That is to say, the former column shows what the town unaided is doing for the child, the latter column what the child gets from all sources.

II. *Graduated Valuation Table.*

This table exhibits for the several towns and cities the ratios which the sums raised by taxation and expended for the support of the public schools bear to their respective assessed valuations. For convenience of apprehension the ratio in each case is expressed as so many dollars of tax on a thousand dollars of valuation.

III. *Graduated Attendance Table.*

This table exhibits for the several towns and cities the ratio in each case of the average attendance upon the public schools to the whole number of children between five and fifteen reported in the school census. If there are no private schools, the ratio is likely to be high. If there are no private schools and at the same time an unusually large proportion of the children under five and over fifteen are attending school, the ratio may exceed even a hundred per cent. On the other hand, if children attend private schools in any considerable number, the fact is reflected in a lower ratio.

## I. GRADUATED TAXATION TABLE.

Table showing for the several towns and cities of the State the comparative amounts of money expended for the support of public schools per child, as determined (1) by the number of children between five and fifteen years of age in the town or city and (2) by the number of children in the average membership of the public schools.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.		TOWNS AND CITIES.		AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.		AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
1905-6.	1906-7.			Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.			Local tax for support.	Local tax plus the State and other contributions.
1	1	Lincoln.	.	\$6,577 96	\$6,936 80	137	102	\$48 01	\$64 49	\$68 01	
2	2	Weston.	.	17,089 16	17,089 16	293	282	58 32	60 60	60 60	
5	3	Hull.	.	10,719 23	10,719 23	201	184	53 33	58 26	58 26	
4	4	Brookline.	.	198,557 62	198,557 62	3,611	3,682	54 99	53 93	53 93	
8	5	Manchester.	.	21,357 99	21,357 99	503	399	42 46	53 53	53 53	
3	6	Nahant.	.	7,612 27	7,612 27	194	148	39 24	51 43	51 43	
11	7	Dover.	.	5,471 51	7,153 66	135	108	40 53	50 66	66 24	
6	8	Milton.	.	66,750 05	66,750 05	1,291	1,384	51 70	48 23	48 23	
9	9	Petersham.	.	5,509 02	6,966 61	139	117	39 63	47 09	59 54	
46	10	Swampscott.	.	29,462 38	29,462 38	776	657	37 97	44 84	44 84	
7	11	Wellesley.	.	37,016 43	37,066 46	760	871	42 71	42 50	42 56	
14	12	Cohasset.	.	17,362 75	17,368 05	378	435	45 93	39 91	40 00	
15	13	Newton.	.	239,793 32	239,793 32	6,521	6,012	36 77	39 89	39 89	
16	14	West Boylston.	.	7,377 60	9,275 56	184	185	40 10	39 88	50 14	
63	15	Bourne.	.	11,637 05	12,313 00	273	292	42 63	39 85	42 17	
41	16	Harvard.	.	5,165 49	6,798 49	149	131	34 67	39 43	51 90	
13	17	Hopedale.	.	13,569 62	13,569 62	328	352	41 37	38 55	38 55	
25	18	Stoughton.	.	13,006 86	13,547 39	370	333	35 15	38 48	40 08	
20	19	Falmouth.	.	20,122 14	20,595 14	513	538	39 22	37 75	38 64	
17	20	Lancaster.	.	12,919 00	13,919 00	398	350	32 46	36 91	39 77	

Table showing the comparative amounts of money expended for the support, etc. — Continued.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	TOWNS AND CITIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1905-6.</b>								
31	Marton.	\$4,291 88	\$5,183 98	141	117	\$30 44	\$36 67	\$44 28
21	Boston.	3,400,187 66	3,455,546 30	104,018	93,442	32 69	36 39	36 98
22	Burlington.	2,149 92	3,333 04	59	60	36 44	35 83	55 55
12	Hamilton.	9,555 29	9,862 29	315	274	30 33	34 87	35 99
18	Boxford.	2,698 73	3,860 85	106	78	25 46	34 60	49 50
212	Wrentham.	7,131 45	7,877 51	216	207	33 02	34 45	38 06
26	Plainville.	6,958 27	7,633 27	212	205	32 82	33 94	37 24
27	Yarmouth.	6,476 03	9,583 50	168	191	38 55	33 91	50 17
38	Webster.	22,888 81	22,888 81	2,029	685	11 28	33 41	33 41
19	Beverly.	94,354 88	94,354 88	2,745	2,827	34 37	33 38	33 38
47	Tewksbury.	6,057 33	8,985 03	215	182	28 17	33 28	49 09
69	Barnstable.	23,663 66	27,153 47	647	713	36 57	33 16	38 08
32	Waltham.	99,824 60	99,950 10	3,844	3,047	25 97	32 76	32 80
33	Bedford.	4,678 60	6,649 60	190	143	24 62	32 72	46 50
28	Holyoke.	199,658 50	199,658 50	10,585	6,108	18 86	32 69	32 69
35	Arlington.	56,123 41	56,359 18	1,773	1,719	31 65	32 65	32 79
42	Westwood.	5,760 29	7,113 85	228	178	25 26	32 36	39 97
22	Lexington.	27,753 61	28,370 76	805	865	34 48	32 09	32 80
26	Canton.	17,955 86	18,211 36	817	562	21 98	31 95	32 40
43	Dedham.	49,604 19	51,100 63	1,362	1,556	36 42	31 88	32 84
34	Cambridge.	474,302 32	481,160 63	15,929	14,907	29 77	31 82	32 28
37	Lowell.	348,052 33	355,221 54	13,964	10,962	24 92	31 75	32 40
42	Scituate.	14,287 60	14,339 60	414	453	34 51	31 54	31 65
36	Boylston.	3,224 67	4,751 42	118	103	27 33	31 31	46 13
43	Hingham.	25,264 37	26,962 37	744	813	33 96	31 08	33 16
53	Winchester.	49,816 89	50,029 89	1,517	1,612	32 83	30 90	31 04
94	Sudbury.	6,722 83	8,469 58	178	173	37 77	30 88	48 96
52	Malden.	196,482 53	196,687 93	7,476	6,393	26 28	30 73	30 77
48								
56								
<b>1906-7.</b>								



Table showing the comparative amounts of money expended for the support, etc. — Continued.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	TOWNS AND CITIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1905-6.</b>								
74	Winthrop, . . .	\$38,218 90	\$38,218 90	1,334	1,379	\$28 64	\$27 71	\$27 71
88	West Brookfield, . . .	4,480 11	5,937 51	168	162	26 66	27 66	36 65
108	Norwood, . . .	39,278 25	39,278 25	1,411	1,426	27 84	27 54	27 54
95	Tyngsborough, . . .	3,188 74	5,732 18	119	116	26 80	27 49	49 42
127	Lynn, . . .	270,660 17	272,037 16	12,442	9,855	21 75	27 46	27 60
92	Gardner, . . .	43,255 22	43,722 68	2,158	1,594	20 04	27 14	27 43
80	Princeton, . . .	4,195 99	5,832 92	162	155	25 90	27 07	37 63
93	Amesbury, . . .	25,405 62	25,533 32	1,600	943	15 88	26 96	27 08
164	Revere, . . .	75,051 67	75,145 79	2,981	2,805	25 18	26 76	26 79
96	Needham, . . .	22,552 23	23,990 98	788	845	28 62	26 69	28 39
78	Prescott, . . .	1,354 94	2,573 21	54	51	25 09	26 57	30 46
248	Westfield, . . .	55,690 33	63,174 44	2,433	2,101	22 89	26 51	30 07
98	Dalton, . . .	15,103 44	16,055 94	600	571	25 17	26 45	28 12
93	Frammingham, . . .	54,050 37	54,779 91	1,892	2,044	28 57	26 44	26 80
123	Melrose, . . .	78,129 30	78,129 30	2,856	2,955	27 36	26 44	26 44
55	Barre, . . .	9,694 42	11,632 22	425	367	22 81	26 42	31 70
60	Brewster, . . .	2,613 14	3,801 06	113	99	23 13	26 40	38 39
90	Wareham, . . .	14,783 45	15,734 18	592	563	24 97	26 26	27 95
128	Stoneham, . . .	28,685 18	28,837 82	1,035	1,093	27 72	26 24	26 42
138	Peabody, . . .	49,708 02	49,974 52	2,437	1,901	20 40	26 15	26 29
125	Chicopee, . . .	64,797 06	64,900 56	3,544	2,493	18 28	25 99	26 03
105	Ludlow, . . .	15,899 34	17,059 40	697	612	22 81	25 98	27 87
112	Brockton, . . .	201,908 48	202,155 73	8,314	7,781	24 29	25 95	25 98
131	Maynard, . . .	19,948 26	20,573 26	742	769	26 88	25 94	26 75
161	Everett, . . .	160,345 87	160,626 37	5,689	6,187	28 19	25 92	25 96
110	Williamstown, . . .	19,524 78	19,753 64	808	756	24 16	25 83	26 13
113	Ashby, . . .	3,046 91	4,886 57	128	118	23 80	25 82	41 41
103	Norwell, . . .	6,161 78	8,184 94	231	239	22 35	25 78	34 25
126								
<b>1905-7.</b>								
88	Winthrop, . . .	\$38,218 90	\$38,218 90	1,334	1,379	\$28 64	\$27 71	\$27 71
89	West Brookfield, . . .	4,480 11	5,937 51	168	162	26 66	27 66	36 65
90	Norwood, . . .	39,278 25	39,278 25	1,411	1,426	27 84	27 54	27 54
91	Tyngsborough, . . .	3,188 74	5,732 18	119	116	26 80	27 49	49 42
92	Lynn, . . .	270,660 17	272,037 16	12,442	9,855	21 75	27 46	27 60
93	Gardner, . . .	43,255 22	43,722 68	2,158	1,594	20 04	27 14	27 43
94	Princeton, . . .	4,195 99	5,832 92	162	155	25 90	27 07	37 63
95	Amesbury, . . .	25,405 62	25,533 32	1,600	943	15 88	26 96	27 08
96	Revere, . . .	75,051 67	75,145 79	2,981	2,805	25 18	26 76	26 79
97	Needham, . . .	22,552 23	23,990 98	788	845	28 62	26 69	28 39
98	Prescott, . . .	1,354 94	2,573 21	54	51	25 09	26 57	30 46
99	Westfield, . . .	55,690 33	63,174 44	2,433	2,101	22 89	26 51	30 07
100	Dalton, . . .	15,103 44	16,055 94	600	571	25 17	26 45	28 12
101	Frammingham, . . .	54,050 37	54,779 91	1,892	2,044	28 57	26 44	26 80
102	Melrose, . . .	78,129 30	78,129 30	2,856	2,955	27 36	26 44	26 44
103	Barre, . . .	9,694 42	11,632 22	425	367	22 81	26 42	31 70
104	Brewster, . . .	2,613 14	3,801 06	113	99	23 13	26 40	38 39
105	Wareham, . . .	14,783 45	15,734 18	592	563	24 97	26 26	27 95
106	Stoneham, . . .	28,685 18	28,837 82	1,035	1,093	27 72	26 24	26 42
107	Peabody, . . .	49,708 02	49,974 52	2,437	1,901	20 40	26 15	26 29
108	Chicopee, . . .	64,797 06	64,900 56	3,544	2,493	18 28	25 99	26 03
109	Ludlow, . . .	15,899 34	17,059 40	697	612	22 81	25 98	27 87
110	Brockton, . . .	201,908 48	202,155 73	8,314	7,781	24 29	25 95	25 98
111	Maynard, . . .	19,948 26	20,573 26	742	769	26 88	25 94	26 75
112	Everett, . . .	160,345 87	160,626 37	5,689	6,187	28 19	25 92	25 96
113	Williamstown, . . .	19,524 78	19,753 64	808	756	24 16	25 83	26 13
114	Ashby, . . .	3,046 91	4,886 57	128	118	23 80	25 82	41 41
115	Norwell, . . .	6,161 78	8,184 94	231	239	22 35	25 78	34 25



## SCHOOL RETURNS.

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86	Deerfield,	.	.	.	7,025 24	8,432 49	333	273	21 10	25 73	30 89
102	Pittsfield,	.	.	.	103,245 18	103,245 18	4,410	4,033	23 41	25 60	25 80
109	Natick,	.	.	.	44,526 31	45,104 56	1,644	1,743	27 08	25 55	25 88
154	Norfolk,	.	.	.	3,439 96	4,991 64	146	135	23 56	25 48	36 98
124	Duxbury,	.	.	.	5,926 98	6,919 05	227	233	25 11	25 44	29 70
96	Greenfield,	.	.	.	39,789 12	40,818 87	1,545	1,565	25 75	25 42	26 08
160	Clinton,	.	.	.	48,257 70	48,257 70	2,274	1,899	21 22	25 41	25 41
123	Spencer,	.	.	.	24,001 99	24,469 46	1,266	946	18 96	25 37	25 87
113	Abington,	.	.	.	23,433 17	24,587 17	826	928	25 27	25 25	26 49
124	Taunton,	.	.	.	116,351 99	119,121 78	5,564	4,611	20 91	25 23	25 83
114	North Andover,	.	.	.	20,086 56	20,086 56	800	797	25 11	25 20	25 20
107	Dudley,	.	.	.	8,946 94	10,268 23	734	356	12 19	25 13	28 84
149	Adams,	.	.	.	42,091 30	42,091 30	2,350	1,678	17 91	25 08	25 08
145	North Attleborough,	.	.	.	31,253 10	31,304 10	1,257	1,248	24 86	25 04	25 08
143	Northampton,	.	.	.	70,668 65	74,048 10	3,107	2,831	22 74	24 96	26 16
97	Wellesley,	.	.	.	3,238 34	4,170 86	135	130	23 99	24 91	32 08
142	Mattapoisett,	.	.	.	4,783 38	6,238 13	206	192	23 22	24 91	32 49
152	Medfield,	.	.	.	6,000 00	8,027 87	236	241	25 42	24 90	33 31
99	Plymouth,	.	.	.	46,770 18	46,788 43	1,858	1,880	25 17	24 88	24 89
140	Weymouth,	.	.	.	53,295 50	53,430 65	2,064	2,148	25 82	24 81	24 87
136	Warren,	.	.	.	13,860 33	16,785 96	729	561	19 01	29 92	29 92
129	Wakefield,	.	.	.	51,048 88	53,086 68	1,973	2,070	25 87	24 66	25 65
162	Stow,	.	.	.	4,110 74	6,388 84	204	167	20 15	24 66	38 26
137	Westford,	.	.	.	9,834 66	11,537 16	407	399	24 16	24 65	28 92
139	Franklin,	.	.	.	22,086 40	22,875 75	997	898	22 15	24 60	25 47
133	Chelmsford,	.	.	.	18,388 54	19,542 54	795	750	23 13	24 52	26 06
119	Bridgewater,	.	.	.	20,502 75	29,099 85	707	838	29 00	24 47	34 73
158	Fall River,	.	.	.	334,081 86	342,316 41	20,951	13,659	15 71	24 46	25 06
122	Mendon,	.	.	.	3,441 70	5,403 36	148	141	23 25	24 41	38 32
106	Townsend,	.	.	.	6,804 44	8,228 92	255	279	26 08	24 39	29 49
130	Oak Bluffs, <sup>1</sup>	.	.	.	4,579 76	5,130 06	261	189	17 55	24 23	27 09
194	Dartmouth,	.	.	.	14,127 05	14,903 51	744	583	18 99	24 23	25 56
148	Westborough,	.	.	.	16,425 20	16,445 65	644	681	25 50	24 12	26 55
135	Grafton,	.	.	.	19,729 55	21,718 23	870	818	22 68	24 12	26 55
149	Brainree,	.	.	.	32,082 15	32,393 85	1,226	1,331	26 17	24 10	24 34
157	Royalston,	.	.	.	3,267 60	5,233 35	145	136	22 54	24 03	38 48
205	Marlborough,	.	.	.	54,755 11	55,090 69	2,964	2,286	18 47	23 95	24 10
144	Foxborough,	.	.	.	13,065 27	14,741 75	570	548	22 75	23 84	26 90
115		.	.	.							

<sup>1</sup> Name changed from Cottage City.

## BOARD OF EDUCATION.

Table showing the comparative amounts of money expended for the support, etc. — Continued.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	TOWNS AND CITIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1905-6.</b>								
141	Great Barrington, . . .	\$25,659 56	\$27,913 31	999	1,084	\$25 69	\$23 67	\$25 75
154	Chelsea, . . .	150,721 88	151,216 07	7,419	6,386	20 32	23 60	23 68
155	Mansfield, . . .	18,512 11	19,716 79	828	785	22 36	23 58	25 12
201	Chatham, . . .	5,580 96	7,028 27	235	236	23 66	23 56	29 78
228	Nantucket, . . .	8,690 16	8,690 16	414	369	20 99	23 55	23 55
224	Shrewsbury, . . .	6,350 79	7,937 47	342	270	18 57	23 52	29 40
159	Hopkinton, . . .	9,515 00	11,579 56	403	407	23 68	23 45	28 45
169	Milford, . . .	38,476 79	38,713 12	2,050	1,642	18 77	23 43	23 58
111	Palmer, . . .	25,356 51	25,969 47	1,238	1,084	20 48	23 39	23 96
156	Danvers, . . .	35,237 10	36,052 60	1,422	1,508	24 78	23 37	23 91
163	Billerica, . . .	10,735 26	12,163 38	506	462	21 22	23 24	26 33
189	Attol, . . .	26,425 45	27,788 52	1,219	1,140	21 68	23 18	24 38
174	South Hadley, . . .	19,949 22	20,996 24	862	863	23 14	23 12	24 33
166	Ashland, . . .	6,997 54	9,227 31	298	303	23 48	23 09	30 45
147	Orange, . . .	23,650 30	23,650 30	976	1,026	24 23	23 05	23 05
153	Middleborough, . . .	29,148 94	29,148 94	1,241	1,268	23 49	22 99	22 99
165	Edgartown, . . .	3,719 21	5,125 71	185	162	20 10	22 96	31 64
244	Fairhaven, . . .	17,992 56	28,054 56	846	785	21 27	22 92	35 74
163	Bolton, . . .	2,403 14	4,686 65	101	105	23 79	22 89	44 63
221	Sandwich, . . .	5,144 95	6,797 35	206	225	24 98	22 87	30 21
263	Southbridge, . . .	23,296 44	24,196 44	2,074	1,019	11 23	22 86	23 75
73	Lee, . . .	13,419 01	15,369 13	735	594	18 26	22 59	25 87
193	Saugus, . . .	30,804 18	31,295 68	1,326	1,367	23 23	22 53	22 89
186	Stoughton, . . .	18,206 41	19,044 66	1,021	810	17 83	22 48	23 51
170	Agawam, . . .	9,682 53	11,354 74	484	431	20 01	22 47	26 35
150	Sheffield, . . .	5,403 14	7,417 59	266	242	21 11	22 33	30 65
179	Easton, . . .	22,256 03	29,738 08	953	998	23 55	22 30	29 80
210	Sunderland, . . .	2,862 57	5,046 30	151	129	18 96	22 19	39 12
181								
<b>1905-7.</b>								

## SCHOOL RETURNS.

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242	182	Warwick,	2,124 17	3,847 55	107	96	19 85	22 13	40 08
328	183	Boxborough,	951 25	2,581 00	56	43	16 99	22 12	60 02
230	184	Wilmington,	7,716 73	9,261 53	347	349	22 24	22 11	26 54
182	185	Newbury,	4,553 94	6,576 86	205	206	22 21	22 11	31 93
151	186	Rockland,	24,932 90	25,581 90	1,058	1,129	23 57	22 08	22 66
209	187	Brookfield,	8,830 93	10,618 05	374	400	23 61	22 08	26 55
196	188	Marblehead,	26,552 06	26,552 06	1,126	1,207	23 58	22 00	22 00
178	189	North Reading,	2,652 46	5,033 09	150	121	17 68	21 92	41 60
222	190	Oxford,	11,343 16	12,398 16	517	522	21 94	21 73	23 75
175	191	Northborough,	7,790 10	9,701 90	347	359	22 45	21 70	27 02
192	192	Whitman,	28,581 52	29,510 21	1,226	1,261	23 31	21 67	23 40
172	193	Kingston,	8,347 48	10,346 48	367	386	22 75	21 63	26 80
306	194	Tyringham,	884 87	1,584 87	58	41	15 26	21 58	38 66
231	195	Holliston,	10,318 21	11,278 46	427	479	24 16	21 54	23 55
199	196	Quincy,	120,198 98	120,331 98	6,902	5,591	17 42	21 50	21 52
181	197	Hanover,	8,042 50	9,171 82	350	375	22 98	21 45	24 46
177	198	Hudson,	22,342 57	22,726 40	1,065	1,042	20 98	21 44	21 81
159	199	Methuen,	31,240 80	33,738 30	1,837	1,459	17 01	21 41	23 12
204	200	Woburn,	59,124 59	59,720 19	3,350	2,776	17 65	21 30	21 51
155	201	Randolph,	13,707 93	15,211 06	696	647	19 78	21 28	23 51
219	202	Bellingham,	5,601 25	7,619 91	308	265	18 19	21 14	28 75
216	203	Lunenburg,	4,350 65	5,857 38	220	206	24 32	21 12	28 43
241	204	Russell,	3,134 20	4,759 17	170	150	18 55	21 03	31 73
198	205	Merrimac,	7,404 77	9,032 66	318	355	20 86	20 85	25 44
239	206	Shelburne,	4,941 01	7,268 70	231	237	21 39	20 85	30 67
187	207	Leicester,	13,744 41	15,239 31	708	661	19 41	20 79	23 05
254	208	Dighton,	6,414 56	7,903 53	343	309	18 70	20 76	25 57
213	209	Northbridge,	27,956 81	27,956 81	1,415	1,352	19 76	20 68	20 68
238	210	Brimfield,	2,188 01	3,722 55	146	106	14 99	20 64	35 12
233	211	Georgetown,	5,506 79	7,641 73	304	267	18 11	20 62	28 62
237	212	Dennis,	6,754 70	8,109 07	272	328	24 83	20 59	24 72
225	213	Barnardston,	2,591 73	5,229 41	120	126	21 66	20 57	41 50
225	214	Newburyport,	40,534 95	43,000 91	2,358	1,984	17 19	20 43	21 67
188	215	Sturbridge,	6,021 09	8,205 59	335	295	17 38	20 41	27 82
200	216	Gloucester,	95,119 58	95,119 58	4,592	4,673	20 71	20 36	20 36
215	217	East Bridgewater,	10,842 50	12,308 69	523	503	20 34	20 34	23 09
176	218	North Brookfield,	8,558 21	10,471 72	530	422	16 15	20 28	24 81
207	219	West Springfield,	33,753 09	36,483 21	1,627	1,665	20 75	20 27	21 91
266	220	Sterling,	4,038 46	6,219 59	201	200	20 09	20 19	31 10

*Table showing the comparative amounts of money expended for the support, etc. — Continued.*

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	TOWNS AND CITIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1906-6.</b>								
203	Uxbridge, . . . . .	\$14,694 47	\$16,259 72	748	731	\$19 65	\$20 10	\$22 24
203	Orleans, . . . . .	3,524 71	5,539 12	167	176	21 11	20 03	31 47
222	Amherst, . . . . .	16,456 70	18,718 49	772	822	21 32	20 02	22 77
223	Northfield, . . . . .	4,582 84	6,209 21	252	229	18 19	20 01	27 11
225	Acushnet, . . . . .	3,779 66	5,637 70	239	189	15 81	20 00	29 83
226	Rutland, . . . . .	4,156 18	6,121 81	237	208	17 54	19 98	29 43
227	Sandwich, . . . . .	1,782 35	2,858 54	124	90	14 37	19 80	31 76
183	Pepperell, . . . . .	13,519 33	15,146 83	611	683	22 13	19 79	22 18
228	Lynnfield, . . . . .	1,917 38	3,999 38	118	97	16 25	19 77	41 23
229	Medway, . . . . .	8,634 87	10,312 50	433	437	19 94	19 76	23 60
230	Monson, . . . . .	13,072 35	15,832 85	668	675	19 57	19 37	23 46
231	West Newbury, . . . . .	4,807 05	6,977 80	265	249	18 14	19 31	28 02
232	Groveland, . . . . .	8,220 67	9,718 78	383	426	22 81	19 30	22 44
233	Ipswich, . . . . .	15,039 16	17,551 97	861	782	17 47	19 23	22 44
274	Hatfield, . . . . .	4,689 02	6,602 62	263	244	17 83	19 22	27 06
281	Ayer, . . . . .	9,067 55	10,637 54	447	472	20 29	19 21	22 54
236	Hubbardston, . . . . .	3,495 25	4,851 00	199	183	17 56	19 10	26 51
237	Rockport, . . . . .	15,564 07	15,564 07	840	818	18 53	19 03	23 25
238	Holden, . . . . .	9,013 07	11,021 66	423	474	21 31	19 01	23 25
208	Swansea, . . . . .	5,209 83	7,331 49	311	276	16 75	18 88	26 56
197	Essex, . . . . .	6,091 59	7,549 47	321	324	10 90	18 80	23 30
279	West Bridgewater, . . . . .	5,841 60	7,470 77	345	313	16 93	18 66	23 87
241	Granby, . . . . .	2,609 34	4,945 46	119	141	21 93	18 51	35 07
242	Douglas, . . . . .	5,764 63	7,166 73	362	312	15 92	18 48	22 97
243	Winchendon, . . . . .	18,342 01	26,899 79	1,117	995	16 42	18 43	27 03
235	Milbury, . . . . .	13,493 15	14,488 02	948	736	14 23	18 33	19 68
244	Hadley, . . . . .	5,056 85	8,585 97	305	276	16 58	18 32	31 11
246	Tisbury, . . . . .	3,623 76	5,358 26	188	198	19 28	18 30	27 06
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<b>1906-7.</b>								
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### SCHOOL RETURNS.

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247	249	Conway,	4,033	27	5,976	90	214	221	18 85	18 25	27 04
116	250	Plymouth,	871	55	1,848	22	60	48	14 53	18 16	38 50
289	251	Blamford,	1,987	62	3,860	34	118	110	16 84	18 07	35 09
287	252	Millis,	4,332	81	6,113	74	238	240	18 21	18 05	25 47
227	253	Upton,	5,988	55	7,484	18	324	332	18 48	18 04	22 54
287	254	Holbrook,	8,436	95	9,914	24	437	469	18 46	17 99	21 14
267	255	Westport,	7,568	98	8,966	83	492	421	15 39	17 98	21 30
173	256	Dunstable,	1,312	26	2,754	36	85	73	15 44	17 98	37 73
265	257	Easthampton,	20,176	15	21,152	69	1,194	1,125	16 90	17 93	18 80
163	258	Harwich,	6,327	42	7,781	82	374	354	16 92	17 87	21 98
261	259	New Salem,	2,096	31	4,363	14	105	118	19 96	17 77	36 98
167	260	Richmond,	1,362	14	3,294	20	88	77	15 48	17 69	42 78
238	261	Hampden,	1,590	19	3,886	08	98	90	16 23	17 67	37 62
324	262	Eastham,	1,164	79	2,824	09	72	66	16 18	17 65	42 79
293	263	Halifax,	1,182	39	2,428	28	87	67	13 59	17 61	36 24
245	264	Shirley,	4,825	96	6,846	08	302	274	15 98	17 61	24 99
276	265	Templeton,	9,809	81	11,381	27	700	561	14 01	17 49	20 29
223	266	Cheshire,	3,530	93	5,555	31	241	203	14 65	17 39	27 37
211	267	Sheshorn,	3,321	30	4,678	93	222	191	14 96	17 39	24 50
280	268	Middleton,	2,398	53	4,222	36	173	138	14 44	17 38	30 67
344	269	Heath,	948	90	1,906	68	59	55	16 08	17 25	34 67
171	270	Erving,	3,369	75	5,650	02	185	196	18 21	17 19	28 83
317	271	Raynham,	3,911	17	5,733	67	238	228	16 43	17 15	25 15
240	272	Charlton,	6,530	27	8,288	80	396	382	16 49	17 09	21 70
285	273	Blackstone,	17,514	90	18,205	06	1,189	1,025	14 73	17 09	17 76
321	274	Southwick,	2,496	66	5,327	23	167	147	14 95	16 98	36 24
270	275	Ashburnham,	5,951	65	8,046	45	367	351	16 22	16 96	22 92
312	276	Lanesborough,	1,759	64	3,506	84	128	104	13 75	16 92	33 72
335	277	Wendell,	1,141	88	2,328	41	98	68	11 65	16 79	34 24
288	278	Avon,	6,126	41	7,620	98	387	365	15 83	16 78	20 88
271	279	Pembroke,	2,855	18	4,307	10	201	171	14 20	16 70	25 19
251	280	Enfield,	2,754	21	4,889	71	192	165	14 34	16 69	29 63
262	281	Chesterfield,	1,252	98	1,672	77	93	76	13 47	16 49	22 01
232	282	Rochester,	2,319	74	4,384	61	155	143	14 97	16 22	30 66
229	283	West Stockbridge,	2,377	63	4,952	57	196	147	12 13	16 17	33 69
255	284	Carlisle,	1,293	87	2,759	62	98	80	13 20	16 17	34 50
284	285	Paxton,	1,200	00	2,734	46	96	75	12 50	16 00	36 46
253	286	Rehoboth,	4,511	38	6,685	13	352	282	12 82	16 00	23 71
308	287	Hanson,	3,579	91	5,251	42	230	224	15 56	15 98	23 44

Table showing the comparative amounts of money expended for the support, etc. — Concluded.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	TOWNS AND CITIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1905-6.</b>								
299	Granville, . . .	\$2,316 33	\$4,308 45	167	146	\$13 87	\$15 87	\$29 51
288	Becket, . . .	2,139 00	4,711 36	164	135	13 04	15 84	34 90
218	Chester, . . .	3,894 81	7,099 31	279	247	13 96	15 77	28 74
277	Charlmont, . .	2,445 94	5,026 36	179	156	13 86	15 68	32 22
286	Salisbury, . .	3,318 20	4,812 36	268	213	12 36	15 58	22 59
292	Savoy, . . .	1,167 45	3,026 53	91	75	12 83	15 57	40 35
311	Westminster, .	3,800 62	5,408 50	237	245	16 04	15 51	22 08
294	Auburn, . . .	4,776 04	6,657 09	441	308	10 83	15 51	21 61
300	Phillipston, . .	972 71	2,623 06	70	63	13 90	15 44	41 64
310	Provincetown, .	14,266 08	16,093 64	917	926	15 56	15 41	17 38
269	Dana, . . .	1,968 96	3,938 87	133	128	14 80	15 38	30 77
217	Chilmark, . . .	397 78	1,451 84	33	26	12 05	15 30	55 84
305	Shutesbury, . .	749 53	2,135 40	54	49	13 88	15 30	43 58
323	Belchertown, . .	5,958 66	8,587 24	354	392	16 83	15 20	21 91
301	Freetown, . . .	3,606 43	5,145 31	273	239	13 21	15 09	21 53
302	Egremont, . . .	1,200 00	2,777 89	84	80	14 29	15 00	34 72
325	Huntington, . .	4,797 04	7,476 55	298	320	16 10	14 99	23 36
272	New Marlborough,	2,706 12	4,502 25	213	182	12 70	14 87	24 74
264	Buckland, . . .	3,537 38	6,306 00	265	238	13 35	14 86	26 50
297	Colrain, . . .	4,447 77	7,297 23	364	303	12 22	14 68	24 08
309	Alford, . . .	539 95	1,504 91	43	37	12 56	14 59	40 67
343	Washington, . .	830 60	2,055 35	65	57	12 78	14 57	36 06
341	Somerset, . . .	6,249 79	7,544 79	479	435	13 05	14 37	17 34
260	Truro, . . .	1,952 27	3,463 15	154	136	12 68	14 35	25 46
330	Ashfield, . . .	2,190 80	4,601 41	146	153	15 01	14 32	30 07
283	West Tisbury, .	1,024 15	2,447 21	53	72	19 32	14 22	33 99
340	Goshen, . . .	714 49	1,540 74	68	51	10 51	14 01	30 21
350	Westhampton, .	1,300 00	2,683 49	120	93	10 83	13 98	28 85
256								
<b>1906-7.</b>								
285	Granville, . . .	\$2,316 33	\$4,308 45	167	146	\$13 87	\$15 87	\$29 51
289	Becket, . . .	2,139 00	4,711 36	164	135	13 04	15 84	34 90
280	Chester, . . .	3,894 81	7,099 31	279	247	13 96	15 77	28 74
291	Charlmont, . .	2,445 94	5,026 36	179	156	13 86	15 68	32 22
275	Salisbury, . .	3,318 20	4,812 36	268	213	12 36	15 58	22 59
293	Savoy, . . .	1,167 45	3,026 53	91	75	12 83	15 57	40 35
294	Westminster, .	3,800 62	5,408 50	237	245	16 04	15 51	22 08
282	Auburn, . . .	4,776 04	6,657 09	441	308	10 83	15 51	21 61
300	Phillipston, . .	972 71	2,623 06	70	63	13 90	15 44	41 64
310	Provincetown, .	14,266 08	16,093 64	917	926	15 56	15 41	17 38
297	Dana, . . .	1,968 96	3,938 87	133	128	14 80	15 38	30 77
217	Chilmark, . . .	397 78	1,451 84	33	26	12 05	15 30	55 84
305	Shutesbury, . .	749 53	2,135 40	54	49	13 88	15 30	43 58
303	Belchertown, . .	5,958 66	8,587 24	354	392	16 83	15 20	21 91
302	Freetown, . . .	3,606 43	5,145 31	273	239	13 21	15 09	21 53
318	Egremont, . . .	1,200 00	2,777 89	84	80	14 29	15 00	34 72
325	Huntington, . .	4,797 04	7,476 55	298	320	16 10	14 99	23 36
272	New Marlborough,	2,706 12	4,502 25	213	182	12 70	14 87	24 74
264	Buckland, . . .	3,537 38	6,306 00	265	238	13 35	14 86	26 50
297	Colrain, . . .	4,447 77	7,297 23	364	303	12 22	14 68	24 08
309	Alford, . . .	539 95	1,504 91	43	37	12 56	14 59	40 67
343	Washington, . .	830 60	2,055 35	65	57	12 78	14 57	36 06
341	Somerset, . . .	6,249 79	7,544 79	479	435	13 05	14 37	17 34
260	Truro, . . .	1,952 27	3,463 15	154	136	12 68	14 35	25 46
330	Ashfield, . . .	2,190 80	4,601 41	146	153	15 01	14 32	30 07
283	West Tisbury, .	1,024 15	2,447 21	53	72	19 32	14 22	33 99
340	Goshen, . . .	714 49	1,540 74	68	51	10 51	14 01	30 21
350	Westhampton, .	1,300 00	2,683 49	120	93	10 83	13 98	28 85
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# SCHOOL RETURNS.

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316	Williamsburg,	5,258 05	8,473 46	384	377	13 69	13 95	22 48
317	Berlin, .	2,343 06	4,797 87	207	170	11 32	13 78	28 22
318	Sutton, .	7,148 34	9,159 16	568	526	12 59	13 59	17 41
319	Hinsdale, .	3,215 58	5,083 14	251	237	12 81	13 57	21 45
296	Montgomery, .	8 566 56	2,237 61	46	42	12 32	13 49	53 28
294	New Braintree,	1,007 37	2,671 50	102	75	9 84	13 43	35 62
320	Seekonk, .	3,250 00	5,459 07	257	242	12 65	13 43	22 52
322	Southampton,	1,959 39	3,753 83	167	147	11 73	13 33	25 54
323	Rowley, .	2,959 12	4,536 39	303	227	9 87	13 17	19 98
324	Wales, .	1,282 35	2,872 85	118	99	10 87	12 95	29 02
325	Windsor, .	1,243 08	3,415 43	105	99	11 84	12 56	34 50
326	Berkley, .	1,718 38	3,328 14	162	137	10 61	12 54	24 29
327	Pelham, .	909 06	2,159 06	100	73	9 09	12 45	29 58
328	Gill, .	1,739 24	3,647 95	166	141	10 48	12 34	25 87
329	Worthington,	1,378 87	3,218 50	110	112	12 54	12 31	28 74
330	Hancock, .	950 90	2,498 69	82	78	11 60	12 19	32 03
331	Hawley, .	808 72	2,587 22	77	68	10 50	11 89	38 05
332	Peru, .	610 00	1,989 64	64	52	9 53	11 73	38 26
333	Holland, .	175 00	1,012 89	21	15	8 33	11 67	67 53
334	Monroe, .	588 40	1,734 22	57	51	10 32	11 54	34 00
335	Florida, .	700 45	2,128 13	91	66	8 36	11 52	32 24
336	East Longmeadow,	3,663 04	7,695 03	344	323	10 65	11 34	23 82
337	Mashpee, .	586 32	1,211 32	44	52	13 33	11 28	23 29
338	Monterey, .	780 85	2,529 61	75	71	10 41	11 00	35 63
339	Leverett, .	1,236 06	3,362 53	123	115	10 05	10 75	29 24
340	Oakham, .	967 01	2,425 76	92	90	10 51	10 74	26 95
341	Leyden, .	793 82	2,289 24	64	74	12 40	10 73	30 94
342	Mt. Washington,	192 01	1,700 51	11	18	17 46	10 67	94 47
343	Cummington,	1,372 90	3,762 34	135	132	10 17	10 40	28 50
344	Lakeville, .	1,372 82	3,494 69	151	132	9 09	10 40	26 74
345	Carlsburg, .	1,961 59	4,269 01	279	198	7 03	9 91	21 56
346	Greenwich, .	455 10	2,150 21	68	52	66 93	8 75	41 35
347	Otis, .	376 36	2,030 86	75	69	7 68	8 35	29 43
348	Plainfield, .	499 48	1,894 10	82	63	7 43	7 93	30 07
349	Rowe, .	609 28	2,332 81	100	82	6 09	7 43	28 45
350	New Ashford, .	61 61	575 27	13	9	4 74	6 85	63 92
351	Middlefield, .	675 31	2,748 01	101	108	6 69	6 25	25 44
352	Gosnold, .	75 00	635 27	18	18	4 17	4 17	35 29
353	Gay Head, .	126 00	1,220 42	42	42	3 00	3 00	29 06

GRADUATED TAXATION TABLE.

Rank according to the amount yielded for each child in the average membership of the public schools by the local tax for school support.	COUNTIES.	AMOUNT EXPENDED FOR THE SUPPORT OF THE PUBLIC SCHOOLS FROM THE —		NUMBER OF CHILDREN —		Amount of local tax for school support for each child between five and fifteen years of age.	AMOUNT YIELDED FOR EACH CHILD IN THE AVERAGE MEMBERSHIP OF THE PUBLIC SCHOOLS BY THE —	
		Local tax only.	Local tax plus the State and other contributions.	In town between five and fifteen years of age.	In the average membership of the public schools.		Local tax for support.	Local tax plus the State and other contributions.
<b>1906-1907.</b>								
1	Suffolk, . . . . .	\$3,664,180 11	\$3,720,127 06	115,752	104,012	\$31 66	\$35 23	\$35 77
2	Norfolk, . . . . .	875,775 03	903,790 18	30,771	28,517	28 46	30 71	31 69
3	Hampden, . . . . .	870,693 53	921,636 10	35,747	28,412	24 36	30 64	32 44
4	Middlesex, . . . . .	2,867,594 90	2,944,370 41	104,424	97,149	27 46	29 52	30 31
5	Essex, . . . . .	1,437,670 09	1,473,680 28	67,145	53,885	21 41	26 08	27 35
6	Worcester, . . . . .	1,406,308 62	1,500,933 20	65,054	55,208	21 62	26 43	28 21
7	Barnstable, . . . . .	113,032 56	136,464 86	4,290	4,457	26 35	25 36	30 62
8	Bristol, . . . . .	941,488 62	996,029 15	49,973	37,348	18 84	25 21	26 67
9	Berkshire, . . . . .	379,237 57	423,295 58	17,959	15,061	21 12	25 18	28 11
10	Plymouth, . . . . .	519,407 30	557,136 27	20,895	20,703	24 86	25 09	26 91
11	Nantucket, . . . . .	8,690 16	8,690 16	414	369	20 99	23 55	23 55
12	Franklin, . . . . .	153,333 65	199,622 24	7,508	6,947	20 42	22 07	28 74
13	Hampshire, . . . . .	201,854 39	245,785 11	10,466	9,561	19 29	21 11	25 71
14	Dukes, . . . . .	13,545 66	21,358 80	780	707	17 37	19 16	30 21

AGGREGATE FOR THE STATE.

State, . . . . .	\$13,452,812 19	\$14,052,899 40	531,077	460,336	\$25 33	\$29 44	\$30 53
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## II. GRADUATED VALUATION TABLE.

*A graduated table in which all the towns in the State are numerically arranged according to the proportion of their taxable property appropriated for the support of public schools for the year 1906-1907.*

For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.	For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.
1	1	West Boylston, .	\$10 12	91	48	Holliston, .	\$6 69
3	2	Plainville, .	10 09	75	49	Dracut, .	6 65
5	3	Abington, .	8 75	39	50	Ashland, .	6 62
36	4	Norton, .	8 23	160	51	Royalston, .	6 61
2	5	Huntington, .	8 22	48	52	Templeton, .	6 59
4	6	Grafton, .	8 10	102	53	Holbrook, .	6 55
7	7	Montague, .	8 01	40	54	Savoy, .	6 53
43	8	Petersham, .	7 85	57	55	New Salem, .	6 52
24	9	South Hadley, .	7 81	69	56	Ashburnham, .	6 50
10	10	Warren, .	7 78	86	57	Saugus, .	6 49
16	11	Blackstone, .	7 75	96	58	Tyngsborough, .	6 48
9	12	Clarksburg, .	7 68	143	59	Medway, .	6 45
15	13	Weymouth, .	7 66	50	60	Gardner, .	6 43
11	14	Monson, .	7 62	110	61	Fairhaven, .	6 41
14	15	Provincetown, .	7 48	61	62	East Bridgewater, .	6 40
73	16	Prescott, .	7 48	157	63	Warwick, .	6 37
41	17	Norwell, .	7 44	78	64	Bridgewater, .	6 36
31	18	Brookfield, .	7 22	95	65	Braintree, .	6 36
33	19	Adams, .	7 17	81	66	Westfield, .	6 33
23	20	Northbridge, .	7 15	52	67	Danvers, .	6 32
20	21	Ware, .	7 12	84	68	Charlemont, .	6 29
13	22	Rockland, .	7 10	98	69	Chicopee, .	6 29
22	23	Colrain, .	7 10	62	70	Leicester, .	6 26
185	24	Cheshire, .	7 09	88	71	Williamstown, .	6 25
17	25	Groveland, .	7 08	112	72	Athol, .	6 25
66	26	Bellingham, .	7 08	30	73	Sturbridge, .	6 24
46	27	Oxford, .	7 05	85	74	Barnardston, .	6 24
60	28	Mansfield, .	7 03	21	75	W. Stockbridge, .	6 21
97	29	Dighton, .	7 02	51	76	Ashby, .	6 20
8	30	Palmer, .	7 01	74	77	Southborough, .	6 18
37	31	Everett, .	6 96	76	78	Foxborough, .	6 18
45	32	Norwood, .	6 96	106	79	Wilmington, .	6 18
25	33	Boylston, .	6 95	70	80	Holden, .	6 15
72	34	Belchertown, .	6 89	79	81	Franklin, .	6 15
26	35	Randolph, .	6 88	27	82	Tewksbury, .	6 14
32	36	Hudson, .	6 87	63	83	Merrimac, .	6 12
6	37	Hardwick, .	6 85	82	84	Wakefield, .	6 10
19	38	Wrentham, .	6 84	107	85	Conway, .	6 08
29	39	Orange, .	6 81	103	86	Clinton, .	6 07
47	40	Spencer, .	6 81	67	87	Pepperell, .	6 04
55	41	Wilbraham, .	6 78	104	88	Haverhill, .	6 04
64	42	Lee, .	6 78	77	89	North Adams, .	6 03
83	43	Avon, .	6 73	94	90	Leominster, .	6 02
35	44	Reading, .	6 72	92	91	Dudley, .	6 01
53	45	Natick, .	6 71	68	92	Methuen, .	5 98
59	46	Middleborough, .	6 70	109	93	Westford, .	5 96
101	47	Whitman, .	6 70	156	94	Sunderland, .	5 96

For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.	For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.
124	95	Malden, . . .	\$5 95	151	155	Concord, . . .	\$5 35
58	96	Barre, . . .	5 93	164	156	Medford, . . .	5 35
111	97	Hopkinton, . . .	5 93	166	157	W. Brookfield, . . .	5 34
38	98	Chester, . . .	5 91	145	158	Stoughton, . . .	5 33
152	99	Stoneham, . . .	5 90	161	159	Harwich, . . .	5 33
49	100	Rehoboth, . . .	5 89	154	160	Taunton, . . .	5 32
119	101	Milford, . . .	5 89	130	161	Hubbardston, . . .	5 31
139	102	Agawam, . . .	5 89	56	162	Somerset, . . .	5 30
196	103	Heath, . . .	5 89	204	163	Truro, . . .	5 30
54	104	Millbury, . . .	5 88	140	164	Westminster, . . .	5 27
131	105	Townsend, . . .	5 87	237	165	Dover, . . .	5 26
168	106	Orleans, . . .	5 87	147	166	Ludlow, . . .	5 25
118	107	Millis, . . .	5 84	125	167	N. Brookfield, . . .	5 24
65	108	Westhampton, . . .	5 83	236	168	Sandwich, . . .	5 24
108	109	Chelmsford, . . .	5 83	159	169	Westborough, . . .	5 19
90	110	Greenfield, . . .	5 82	255	170	W. Bridgewater, . . .	5 19
163	111	Sheffield, . . .	5 82	195	171	Hawley, . . .	5 17
71	112	Sutton, . . .	5 82	162	172	Attleborough, . . .	5 14
87	113	Chelsea, . . .	5 80	28	173	N. Attleborough, . . .	5 13
93	114	Walpole, . . .	5 80	158	174	Easthampton, . . .	5 11
135	115	Hanover, . . .	5 79	176	175	Charlton, . . .	5 11
117	116	Rutland, . . .	5 78	178	176	Rockport, . . .	5 07
89	117	Littleton, . . .	5 77	172	177	Buckland, . . .	5 05
149	118	Wayland, . . .	5 76	128	178	Melrose, . . .	5 04
115	119	Revere, . . .	5 75	184	179	Needham, . . .	5 00
105	120	Williamsburg, . . .	5 74	182	180	Shirley, . . .	4 98
126	121	Brockton, . . .	5 74	273	181	Russell, . . .	4 93
134	122	Essex, . . .	5 73	167	182	Acton, . . .	4 92
138	123	West Springfield, . . .	5 72	187	183	Worcester, . . .	4 92
305	124	Sandisfield, . . .	5 72	219	184	Amesbury, . . .	4 91
113	125	Northborough, . . .	5 71	223	185	Bolton, . . .	4 91
194	126	Acushnet, . . .	5 71	42	186	Florida, . . .	4 90
18	127	East Longmeadow, . . .	5 70	242	187	Billerica, . . .	4 89
121	128	Granville, . . .	5 70	213	188	Norfolk, . . .	4 86
114	129	Dennis, . . .	5 58	226	189	Shelburne, . . .	4 86
132	130	Marlborough, . . .	5 58	170	190	Douglas, . . .	4 85
144	131	Winchendon, . . .	5 58	190	191	Springfield, . . .	4 83
137	132	Chatham, . . .	5 57	239	192	Peru, . . .	4 83
180	133	Hingham, . . .	5 57	278	193	Wales, . . .	4 83
80	134	Kingston, . . .	5 56	193	194	Gt. Barrington, . . .	4 80
136	135	Upton, . . .	5 56	197	195	Stow, . . .	4 80
122	136	Uxbridge, . . .	5 55	292	196	Wendell, . . .	4 79
171	137	Georgetown, . . .	5 53	222	197	Plymouth, . . .	4 77
192	138	Maynard, . . .	5 53	181	198	Ayer, . . .	4 73
127	139	Brimfield, . . .	5 52	177	199	Dalton, . . .	4 72
148	140	Woburn, . . .	5 52	230	200	Auburn, . . .	4 69
153	141	Framingham, . . .	5 52	198	201	Lowell, . . .	4 68
100	142	Mendon, . . .	5 51	211	202	Fitchburg, . . .	4 67
129	143	Northampton, . . .	5 51	206	203	West Newbury, . . .	4 66
150	144	Andover, . . .	5 49	217	204	Brewster, . . .	4 66
34	145	Dana, . . .	5 47	200	205	Winchester, . . .	4 64
146	146	Somerville, . . .	5 46	212	206	Holyoke, . . .	4 63
235	147	Sudbury, . . .	5 45	199	207	Dunstable, . . .	4 62
44	148	Hinsdale, . . .	5 44	261	208	Harvard, . . .	4 60
142	149	Pittsfield, . . .	5 44	123	209	Southbridge, . . .	4 59
169	150	Peabody, . . .	5 43	347	210	Pelham, . . .	4 59
165	151	Arlington, . . .	5 42	234	211	Barnstable, . . .	4 58
262	152	Whately, . . .	5 38	155	212	Becket, . . .	4 57
274	153	Raynham, . . .	5 37	179	213	Deerfield, . . .	4 57
116	154	Granby, . . .	5 36	248	214	Blandford, . . .	4 56

# SCHOOL RETURNS.

CXV

For 1905-1906 by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.	For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dol- lars of valuation.
186	215	Lexington, . . .	\$4 53	270	275	Northfield, . . .	\$3 80
202	216	Amherst, . . .	4 53	188	276.	Monroe, . . .	3 78
224	217	Westport, . . .	4 52	291	277	Ipswich, . . .	3 74
215	218	Windsor, . . .	4 51	289	278	Gay Head, . . .	3 73
216	219	Cambridge, . . .	4 51	232	279	Ashfield, . . .	3 72
250	220	Easton, . . .	4 50	267	280	Bedford, . . .	3 72
205	221	Lawrence, . . .	4 49	271	281	Webster, . . .	3 70
207	222	Canton, . . .	4 48	137	282	Leverett, . . .	3 69
218	223	Quincy, . . .	4 48	276	283	Watertown, . . .	3 69
191	224	Shrewsbury, . . .	4 45	277	284	Groton, . . .	3 69
141	225	N. Marlborough, . . .	4 44	294	285	Stockbridge, . . .	3 69
264	226	Marshfield, . . .	4 42	286	286	Lenox, . . .	3 67
175	227	Cummington, . . .	4 41	285	287	Newbury, . . .	3 65
209	228	North Andover, . . .	4 40	297	288	Burlington, . . .	3 64
225	229	Gloucester, . . .	4 38	281	289	Newburyport, . . .	3 63
231	230	Salem, . . .	4 38	284	290	Newton, . . .	3 63
189	231	Hampden, . . .	4 37	298	291	Lanesborough, . . .	3 63
210	232	Hadley, . . .	4 37	283	292	Marblehead, . . .	3 60
287	233	Edgartown, . . .	4 37	299	293	Phillipston, . . .	3 58
174	234	Worthington, . . .	4 36	290	294	Scituate, . . .	3 57
221	235	Berlin, . . .	4 35	293	295	Middlefield, . . .	3 56
341	236	Goshen, . . .	4 35	133	296	Rowe, . . .	3 55
201	237	Swansea, . . .	4 32	315	297	Swampscott, . . .	3 50
227	238	Dedham, . . .	4 31	300	298	Paxton, . . .	3 47
229	239	Lynn, . . .	4 30	345	299	Alford, . . .	3 41
243	240	Dartmouth, . . .	4 29	322	300	Eastham, . . .	3 40
256	241	Freetown, . . .	4 29	282	301	Shutesbury, . . .	3 39
260	242	Lunenburg, . . .	4 25	352	302	Tyringham, . . .	3 37
244	243	Belmont, . . .	4 22	302	303	Hancock, . . .	3 36
321	244	Berkley, . . .	4 21	306	304	Halifax, . . .	3 33
288	245	Gill, . . .	4 20	333	305	Hanson, . . .	3 29
246	246	Wareham, . . .	4 20	309	306	Middleton, . . .	3 26
268	247	Sterling, . . .	4 20	319	307	Hatfield, . . .	3 22
240	248	Waltham, . . .	4 19	316	308	Topsfield, . . .	3 20
253	249	Hyde Park, . . .	4 16	308	309	Pembroke, . . .	3 08
220	250	Chesterfield, . . .	4 14	332	310	Mattapoisett, . . .	3 08
275	251	Princeton, . . .	4 11	303	311	Carlisle, . . .	3 07
314	252	Carver, . . .	4 11	318	312	Wellfleet, . . .	3 07
266	253	New Bedford, . . .	4 10	295	313	Yarmouth, . . .	3 05
208	254	Salisbury, . . .	4 09	307	314	Hamilton, . . .	3 05
257	255	Rowley, . . .	4 06	344	315	Washington, . . .	3 03
259	256	Beverly, . . .	4 06	313	316	Weston, . . .	3 01
301	257	Bourne, . . .	4 05	312	317	Milton, . . .	3 00
120	258	Richmond, . . .	4 01	325	318	Seekonk, . . .	2 99
241	259	Leyden, . . .	4 00	329	319	Mashpee, . . .	2 99
252	260	Fall River, . . .	4 00	310	320	Duxbury, . . .	2 97
279	261	Winthrop, . . .	3 99	311	321	Wellesley, . . .	2 93
335	262	Boxborough, . . .	3 99	320	322	Oakham, . . .	2 80
249	263	Southampton, . . .	3 97	247	323	Plainfield, . . .	2 79
251	264	Enfield, . . .	3 97	323	324	Westwood, . . .	2 75
228	265	North Reading, . . .	3 96	304	325	Monterey, . . .	2 69
238	266	Sharon, . . .	3 93	245	326	Plympton, . . .	2 68
254	267	Southwick, . . .	3 93	326	327	Nantucket, . . .	2 67
203	268	Rochester, . . .	3 87	328	328	Boston, . . .	2 63
265	269	Medfield, . . .	3 87	330	329	Cohasset, . . .	2 63
269	270	Tolland, . . .	3 87	334	330	Marion, . . .	2 63
99	271	Erving, . . .	3 85	337	331	Egremont, . . .	2 61
214	272	Montgomery, . . .	3 85	263	332	Lynnfield, . . .	2 59
280	273	Longmeadow, . . .	3 84	336	333	Oak Bluffs, . . .	2 58
272	274	Lancaster, . . .	3 81	324	334	Hopedale, . . .	2 57

## BOARD OF EDUCATION.

For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES	Amount appropriated to the support of public schools for each thousand dollars of valuation.	For 1905-1906, by the State valuation of 1905.	For 1906-1907, by the State valuation of 1906.	TOWNS AND CITIES.	Amount appropriated to the support of public schools for each thousand dollars of valuation.
338	335	Falmouth, . . .	\$2 55	339	345	Lakeville, . . .	\$2 14
340	336	Tisbury, . . .	2 55	343	346	Brookline, . . .	2 12
258	337	Sherborn, . . .	2 53	331	347	Holland, . . .	2 02
183	338	Otis, . . .	2 51	342	348	Wenham, . . .	1 89
296	339	New Braintree, . .	2 51	349	349	Manchester, . .	1 88
348	340	West Tisbury, . .	2 40	233	350	Greenwich, . .	1 64
12	341	Mt. Washington, .	2 34	327	351	Chilmark, . .	1 51
317	342	Lincoln, . . .	2 34	351	352	Nahant, . . .	1 36
350	343	Boxford, . . .	2 29	353	353	New Ashford, .	1 17
346	344	Hull, . . .	2 25	354	354	Gosnold, . . .	0 21

## GRADUATED VALUATION TABLE.

*Showing the different counties in the State, numerically arranged, according to the proportion of their taxable property appropriated for the support of public schools for the year 1906-1907.*

For 1906-1907, by the State valuation of 1906.	COUNTIES.	Amount appropriated to the support of public schools for each thousand dollars of valuation	Amount raised by local taxation and expended for the support of public schools, being the total expenditure for such support diminished by contributions from other sources than local taxation.	Valuation of 1906
1	Franklin, . . . . .	\$5 90	\$153,333 65	\$26,006,836
2	Hampshire, . . . . .	5 52	201,854 39	36,351,016
3	Berkshire, . . . . .	5 46	379,237 57	69,483,737
4	Plymouth, . . . . .	5 28	519,407 30	98,380,189
5	Worcester, . . . . .	5 24	1,406,308 62	268,491,544
6	Hampden, . . . . .	5 08	870,693 53	171,427,539
7	Middlesex, . . . . .	4 93	2,867,594 90	581,822,756
8	Bristol, . . . . .	4 44	941,488 62	212,099,451
9	Essex, . . . . .	4 42	1,437,670 09	325,301,472
10	Barnstable, . . . . .	4 16	113,032 56	27,158,050
11	Norfolk, . . . . .	3 62	875,775 03	241,705,198
12	Suffolk, . . . . .	2 74	3,664,180 11	1,338,295,509
13	Nantucket, . . . . .	2 67	8,690 16	3,249,386
14	Dukes, . . . . .	2 65	13,545 66	5,120,482

## AGGREGATE FOR STATE.

State, . . . . .	\$3 95	\$13,452,812 19	\$3,404,893,165
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## III. GRADUATED ATTENDANCE TABLE.

*In which all the towns in the State are numerically arranged according to the ratio of AVERAGE ATTENDANCE of children upon the public schools for the school year ending June, 1906, to the whole number of children in town between 5 and 15 years of age, September 1, 1906.*

	TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
1	Mt. Washington, .	11	17	1.54	41	Milton, .	1,291	1,291	1.00
2	West Tisbury, .	53	63	1.18	42	Braintree, .	1,226	1,224	.99
3	Dennis, .	272	310	1.13	43	Hanover, .	350	349	.99
4	Concord, .	883	978	1.11	44	Wakefield, .	1,973	1,966	.99
5	Bridgewater, .	707	781	1.10	45	Lenox, .	564	559	.99
6	Granby, .	119	130	1.09	46	Erving, .	185	184	.99
7	Mashpee, .	44	48	1.09	47	Kingston, .	367	364	.99
8	Holliston, .	427	453	1.06	48	Middlefield, .	101	100	.99
9	Yarmouth, .	168	178	1.05	49	Marblehead, .	1,126	1,114	.98
10	Dedham, .	1,362	1,440	1.05	50	Bourne, .	273	270	.98
11	Merrimac, .	318	335	1.05	51	Gloucester, .	4,592	4,533	.98
12	Wellesley, .	760	800	1.05	52	Huntington, .	298	294	.98
13	Wayland, .	337	354	1.05	53	Lexington, .	805	793	.98
14	Cohasset, .	378	397	1.05	54	Shelburne, .	231	227	.98
15	Abington, .	826	863	1.04	55	Tisbury, .	188	184	.97
16	Groveland, .	383	400	1.04	56	Whitman, .	1,226	1,199	.97
17	Hingham, .	744	771	1.03	57	Melrose, .	2,856	2,793	.97
18	Everett, .	5,689	5,885	1.03	58	Ayer, .	447	437	.97
19	Leyden, .	64	66	1.03	59	Conway, .	214	209	.97
20	New Salem, .	105	108	1.02	60	Bernardston, .	120	117	.97
21	Southborough, .	288	296	1.02	61	Winchester, .	1,517	1,479	.97
22	Sandwich, .	206	211	1.02	62	Easton, .	953	929	.97
23	Townsend, .	255	261	1.02	63	Orange, .	976	951	.97
24	Pepperell, .	611	625	1.02	64	Scituate, .	414	402	.97
25	Holden, .	423	432	1.02	65	Orleans, .	167	162	.97
26	Barnstable, .	647	660	1.02	66	Northborough, .	347	335	.96
27	Brookfield, .	374	378	1.01	67	Hopkinton, .	403	389	.96
28	Amherst, .	772	780	1.01	68	Ashland, .	298	287	.96
29	Reading, .	1,022	1,031	1.00	69	Holbrook, .	457	440	.96
30	Framingham, .	1,892	1,905	1.00	70	Maynard, .	742	714	.96
31	Belchertown, .	354	356	1.00	71	Provincetown, .	917	882	.96
32	Westborough, .	644	647	1.00	72	Groton, .	341	328	.96
33	Gt. Barrington, .	999	1,003	1.00	73	Middleborough, .	1,241	1,188	.95
34	Needham, .	788	791	1.00	74	Upton, .	324	310	.95
35	Danvers, .	1,422	1,427	1.00	75	E. Bridgewater, .	523	499	.95
36	Hopedale, .	328	329	1.00	76	Saugus, .	1,326	1,265	.95
37	Natick, .	1,644	1,648	1.00	77	Medfield, .	236	225	.95
38	Rockland, .	1,058	1,059	1.00	78	Winthrop, .	1,334	1,267	.94
39	Stoneham, .	1,035	1,036	1.00	79	Westminster, .	237	225	.94
40	Ashfield, .	146	146	1.00	80	Burlington, .	59	56	.94

	TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
81	N. Andover, . . .	800	759	.94	140	Charlton, . . .	396	347	.87
82	Weymouth, . . .	2,064	1,955	.94	141	Brockton, . . .	8,314	7,276	.87
83	Essex, . . .	321	304	.94	142	Dana, . . .	133	116	.87
84	Beverly, . . .	2,745	2,599	.94	143	Acton, . . .	336	293	.87
85	Plymouth, . . .	1,858	1,759	.94	144	Hull, . . .	201	175	.87
86	Rockport, . . .	840	795	.94	145	Shutesbury, . . .	54	47	.87
87	W. Boylston, . . .	184	171	.94	146	Cambridge, . . .	15,929	13,855	.86
88	Norwell, . . .	231	218	.94	147	Hampden, . . .	98	85	.86
89	Duxbury, . . .	227	214	.94	148	Heath, . . .	59	51	.86
90	Norwood, . . .	1,411	1,330	.94	149	Mattapoisett, . . .	206	178	.86
91	W. Springfield, . . .	1,627	1,533	.94	150	Chelmsford, . . .	795	685	.86
92	Oxford, . . .	517	487	.94	151	Ashburnham, . . .	367	316	.86
93	Brookline, . . .	3,611	3,399	.94	152	Fairhaven, . . .	846	728	.86
94	Bolton, . . .	101	95	.94	153	Northampton, . . .	3,107	2,673	.86
95	Greenfield, . . .	1,545	1,452	.93	154	Springfield, . . .	12,338	10,606	.85
96	Belmont, . . .	815	766	.93	155	Wellfleet, . . .	135	116	.85
97	Monson, . . .	668	627	.93	156	Egremont, . . .	84	72	.85
98	Walpole, . . .	730	685	.93	157	Gay Head, . . .	42	36	.85
99	Medford, . . .	3,869	3,629	.93	158	Wrentham, . . .	216	185	.85
100	Medway, . . .	433	406	.93	159	Lunenburg, . . .	220	188	.85
101	Wilbraham, . . .	237	222	.93	160	Leicester, . . .	708	604	.85
102	Plainfield, . . .	60	56	.93	161	Harwich, . . .	374	319	.85
103	Millis, . . .	238	222	.93	162	Pittsfield, . . .	4,410	3,760	.85
104	Marshfield, . . .	249	232	.93	163	Hinsdale, . . .	251	214	.85
105	Wilmington, . . .	347	322	.92	164	Somerset, . . .	479	407	.84
106	South Hadley, . . .	862	799	.92	165	Norfolk, . . .	146	124	.84
107	Cummington, . . .	135	125	.92	166	Buckland, . . .	265	225	.84
108	Oakham, . . .	92	85	.92	167	Royalston, . . .	145	123	.84
109	Newbury, . . .	205	188	.92	168	Hatfield, . . .	263	223	.84
110	Northbridge, . . .	1,415	1,302	.92	169	Blandford, . . .	118	99	.84
111	Chatham, . . .	235	216	.91	170	Andover, . . .	1,248	1,057	.84
112	Somerville, . . .	12,068	11,070	.91	171	Newton, . . .	6,521	5,519	.84
113	Williamsburg, . . .	384	352	.91	172	Worthington, . . .	110	93	.84
114	Arlington, . . .	1,773	1,614	.91	173	W. Newbury, . . .	265	224	.84
115	Hudson, . . .	1,065	967	.90	174	Shirley, . . .	302	255	.84
116	N. Attleborough, . . .	1,257	1,141	.90	175	Plainville, . . .	212	179	.84
117	Sterling, . . .	201	182	.90	176	Mansfield, . . .	828	699	.84
118	Littleton, . . .	214	193	.90	177	Ashby, . . .	128	108	.84
119	Sharon, . . .	323	291	.90	178	Stockbridge, . . .	370	312	.84
120	W. Brookfield, . . .	168	151	.89	179	Monroe, . . .	57	48	.84
121	Weston, . . .	293	263	.89	180	Northfield, . . .	252	212	.84
122	Sudbury, . . .	178	159	.89	181	Ipswich, . . .	861	724	.84
123	Mendon, . . .	148	132	.89	182	Westford, . . .	407	342	.84
124	Dalton, . . .	600	535	.89	183	Palmer, . . .	1,238	1,040	.84
125	Avon, . . .	387	345	.89	184	W. Bridgewater, . . .	345	289	.83
126	Williamstown, . . .	808	720	.89	185	Leverett, . . .	123	103	.83
127	Falmouth, . . .	513	457	.89	186	Raynham, . . .	238	199	.83
128	Gosnold, . . .	18	16	.88	187	Hadley, . . .	305	255	.83
129	Uxbridge, . . .	748	663	.88	188	Hubbardston, . . .	199	166	.83
130	Foxborough, . . .	570	504	.88	189	Dighton, . . .	343	286	.83
131	Grafton, . . .	870	768	.88	190	Eastham, . . .	72	60	.83
132	Tyngsborough, . . .	119	105	.88	191	Harvard, . . .	149	124	.83
133	Wareham, . . .	592	522	.88	192	Billerica, . . .	506	421	.83
134	Athol, . . .	1,219	1,072	.87	193	Hawley, . . .	77	64	.83
135	Revere, . . .	2,981	2,620	.87	194	Sturbridge, . . .	335	278	.82
136	Hanson, . . .	230	202	.87	195	Monterey, . . .	75	62	.82
137	Randolph, . . .	696	611	.87	196	Montgomery, . . .	46	38	.82
138	Easthampton, . . .	1,194	1,050	.87	197	Sheffield, . . .	256	211	.82
139	Princeton, . . .	162	142	.87	198	E. Longmeadow, . . .	344	283	.82

## SCHOOL RETURNS.

cxix

TOWNS AND CITIES.				Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.	TOWNS AND CITIES.				Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.				No. of children between 5 and 15 years of age in each town.	Average attendance upon school.		
199	Ludlow, . . .	697	573	.82	258	Stow, . . .	204	157	.76
200	Charlemont, . . .	179	147	.82	259	Woburn, . . .	3,350	2,572	.76
201	Seekonk, . . .	257	211	.82	260	Freetown, . . .	273	209	.76
202	Sutton, . . .	568	466	.82	261	Dunstable, . . .	85	65	.76
203	Truro, . . .	154	126	.81	262	Westport, . . .	492	375	.76
204	Lancaster, . . .	398	325	.81	263	Windsor, . . .	105	80	.76
205	Worcester, . . .	22,495	18,365	.81	264	Topsfield, . . .	130	99	.76
206	Georgetown, . . .	304	248	.81	265	Haverhill, . . .	6,838	5,201	.76
207	Boston, . . .	104,018	84,870	.81	266	Rowe, . . .	100	76	.76
208	Winchendon, . . .	1,117	910	.81	267	Milford, . . .	2,050	1,555	.75
209	Phillipston, . . .	70	57	.81	268	N. Brookfield, . . .	530	402	.75
210	Brewster, . . .	113	92	.81	269	N. Marlborough, . . .	213	161	.75
211	Agawam, . . .	484	394	.81	270	Berlin, . . .	207	156	.75
212	Otis, . . .	75	61	.81	271	Manchester, . . .	503	379	.75
213	Rochester, . . .	155	126	.81	272	Watertown, . . .	1,925	1,448	.75
214	Barre, . . .	425	345	.81	273	Tewksbury, . . .	215	161	.74
215	Bellingham, . . .	308	250	.81	274	Quincy, . . .	6,902	5,152	.74
216	Gill, . . .	166	134	.80	275	Carlisle, . . .	98	73	.74
217	Franklin, . . .	997	804	.80	276	Becket, . . .	164	122	.74
218	Sherborn, . . .	222	179	.80	277	Lee, . . .	735	546	.74
219	Warwick, . . .	107	86	.80	278	Leominster, . . .	2,615	1,941	.74
220	Lakeville, . . .	151	121	.80	279	Chesterfield, . . .	93	69	.74
221	Carver, . . .	191	153	.80	280	Deerfield, . . .	333	247	.74
222	Swansea, . . .	311	249	.80	281	Dover, . . .	135	100	.74
223	Chelsea, . . .	7,419	5,932	.79	282	Greenwich, . . .	68	50	.73
224	Malden, . . .	7,476	5,952	.79	283	Waltham, . . .	3,844	2,824	.73
225	Chester, . . .	279	222	.79	284	Lynn, . . .	12,442	9,132	.73
226	Sunderland, . . .	151	120	.79	285	North Reading, . . .	150	110	.73
227	Russell, . . .	170	135	.79	286	Wenham, . . .	172	126	.73
228	Blackstone, . . .	1,189	944	.79	287	Warren, . . .	729	534	.73
229	Hancock, . . .	82	65	.79	288	Paxton, . . .	96	70	.72
230	Southwick, . . .	167	132	.79	289	Templeton, . . .	700	510	.72
231	Granville, . . .	167	132	.79	290	Shrewsbury, . . .	342	249	.72
232	Berkley, . . .	162	128	.79	291	Methuen, . . .	1,837	1,337	.72
233	Clinton, . . .	2,274	1,796	.78	292	Salisbury, . . .	268	195	.72
234	Norton, . . .	318	251	.78	293	Savoy, . . .	91	66	.72
235	Edgartown, . . .	185	141	.78	294	Rehoboth, . . .	352	255	.72
236	Rutland, . . .	237	187	.78	295	Acushnet, . . .	239	173	.72
237	Boylston, . . .	118	93	.78	296	Millbury, . . .	948	686	.72
238	Hamilton, . . .	315	248	.78	297	Washington, . . .	65	47	.72
239	Attleborough, . . .	2,440	1,916	.78	298	Nahant, . . .	194	140	.72
240	Douglas, . . .	362	284	.78	299	Alford, . . .	43	31	.72
241	Cheshire, . . .	241	189	.78	300	Peru, . . .	64	46	.71
242	Nantucket, . . .	414	324	.78	301	Lowell, . . .	13,964	9,991	.71
243	Marion, . . .	141	110	.78	302	Westwood, . . .	228	163	.71
244	Taunton, . . .	5,564	4,339	.77	303	Boxborough, . . .	56	40	.71
245	Swampscott, . . .	776	605	.77	304	Peabody, . . .	2,437	1,740	.71
246	Prescott, . . .	54	42	.77	305	Dartmouth, . . .	744	530	.71
247	Petersham, . . .	139	108	.77	306	Dracut, . . .	643	460	.71
248	Newburyport, . . .	2,358	1,831	.77	307	Lanesborough, . . .	128	91	.71
249	Pembroke, . . .	201	156	.77	308	Stoughton, . . .	1,021	725	.71
250	Enfield, . . .	192	149	.77	309	Marlborough, . . .	2,964	2,102	.70
251	Cosrain, . . .	364	282	.77	310	Westhampton, . . .	120	85	.70
252	Montague, . . .	1,338	1,036	.77	311	Whately, . . .	99	70	.70
253	Westfield, . . .	2,433	1,880	.77	312	Middleton, . . .	173	122	.70
254	Richmond, . . .	88	68	.77	313	Bedford, . . .	190	133	.70
255	Southampton, . . .	167	129	.77	314	Spencer, . . .	1,266	879	.69
256	Wales, . . .	118	91	.77	315	Lincoln, . . .	137	95	.69
257	Lynnfield, . . .	118	91	.77	316	Plympton, . . .	60	41	.68

## BOARD OF EDUCATION.

	TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		TOWNS AND CITIES.	No. of children between 5 and 15 years of age in each town.	Average attendance upon school.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
317	Rowley, . . .	303	207	.68	336	Ware, . . .	1,540	984	.63
318	Gardner, . . .	2,158	1,472	.68	337	Canton, . . .	817	520	.63
319	Oak Bluffs, . . .	261	178	.68	338	Chilmark, . . .	33	21	.63
320	Florida, . . .	91	62	.68	339	Sandisfield, . . .	124	78	.62
321	New Bedford, . . .	12,926	8,786	.67	340	Hyde Park, . . .	2,828	1,762	.62
322	Adams, . . .	2,350	1,595	.67	341	Tyringham, . . .	58	36	.62
323	Halifax, . . .	87	59	.67	342	Salem, . . .	6,978	4,305	.61
324	Goshen, . . .	68	46	.67	343	New Ashford, . . .	13	8	.61
325	Brimfield, . . .	146	98	.67	344	Auburn, . . .	441	269	.60
326	W. Stockbridge, . . .	196	131	.66	345	Fall River, . . .	20,951	12,641	.60
327	Holland, . . .	21	14	.66	346	Hardwick, . . .	582	350	.60
328	Longmeadow, . . .	188	125	.66	347	Tolland, . . .	34	20	.58
329	Wendell, . . .	98	65	.66	348	Lawrence, . . .	12,841	7,530	.58
330	Boxford, . . .	106	70	.66	349	Fitchburg, . . .	6,617	3,798	.57
331	Pelham, . . .	100	65	.65	350	Amesbury, . . .	1,600	886	.55
332	Chicopee, . . .	3,544	2,299	.64	351	Holyoke, . . .	10,585	5,655	.53
333	New Braintree, . . .	102	66	.64	352	Southbridge, . . .	2,074	947	.45
334	North Adams, . . .	4,326	2,798	.64	353	Dudley, . . .	734	314	.42
335	Clarksburg, . . .	279	179	.64	354	Webster, . . .	2,029	633	.31

## III. GRADUATED ATTENDANCE TABLE.

*In which all the towns in the State are numerically arranged according to the ratio of AVERAGE ATTENDANCE of children upon the public schools for the school year ending June, 1906, to the whole number of children in town between 5 and 15 years of age, September 1, 1906.*

	COUNTIES.	Ratio of attendance.		COUNTIES.	Ratio of attendance.
1	Barnstable, . . .	.95	9	Nantucket, . . .	.78
2	Plymouth, . . .	.92	10	Berkshire, . . .	.77
3	Middlesex, . . .	.86	11	Worcester, . . .	.75
4	Franklin, . . .	.86	12	Essex, . . .	.74
5	Norfolk, . . .	.85	13	Hampden, . . .	.73
6	Hampshire, . . .	.85	14	Bristol, . . .	.68
7	Dukes, . . .	.82			
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